

PHILADELPHIA, OCTOBER 9, 1880.

ORIGINAL LECTURES.

CLINICAL LECTURES ON MALIGNANT DISEASES OF THE UTERUS.

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Reported by A. H. KELCH, M.D. (Stenographer).

LECTURE II.

TREATMENT OF UTERINE CANCER.

GENTLEMEN,—Until about thirty years ago no radical treatment was resorted to in these cases but the actual cautery, nor was there any that was supposed to be of any decided benefit except this. Afterwards, when Chassaignac invented the *écraseur*, these growths were amputated by it. Finally, when Middledorpf, of Breslau, devised the electro-cautery, the cervix was amputated by that means. It was amputated later by the knife or scissors; then, after the operation for amputation, escharotics were applied. The method now most highly recommended is to remove as much of the growth as possible, after the fashion which best suits our convenience, and then apply either the actual or the potential cautery. Until quite recently it has been customary, where the cervix was amputated above the diseased structure, simply to bring the mucous membrane over the stump of the amputated cervix and allow it to unite; but now this treatment has generally been abandoned, and in most instances where a cancerous growth is removed some form of cautery is applied. Dr. Sims takes strong ground in this direction. He claims that formerly, after amputation alone, the disease sooner or later invariably recurred; but that since he has followed the amputation by the application of some kind of cautery such is not the rule. Dr. Reamy, of Cincinnati, practises after this fashion.

Now, it seems to me that this is a little too extreme, and that there is no reason why the cancerous growth should recur any sooner after the entire removal by the knife, *écraseur*, galvanic cautery, or Wathen's serrated scissors, than it should after removal with the subsequent applica-

tion of caustic; and I am confident that in those cases where Dr. Sims amputated the cervix and then found a constant recurrence of the trouble, the difficulty lay in the fact that he did not remove all the cancerous growth, and that his better success since is due to the fact that the cancerous growth left after the amputation is destroyed by the slough produced by the caustic. When we amputate the neck above the diseased structure and bring the healthy edges together, there results comparatively no cicatricial tissue,—we leave the cervix in a healthy condition; whereas after the application of caustic there is an immense deal of cicatricial tissue that is less able to resist the invasion or ravages of disease. We know that when disease is developed in the system it is most apt to attack that organ or part which has the least power of resistance, and for this reason we would conclude that malignant disease of the uterus would be more liable to recur after the amputation or removal followed by cauterization than after the operation of amputation alone. There is a difference of opinion as to the kind of caustic to be applied. One author has a preference for one, and another for another. Dr. Sims is partial to chloride of zinc; others have used bromine, and claim that this is better than any other. Some use the concentrated solution of sulphate of zinc; others, fuming nitric acid.

I can see very little advantage in one caustic over another, provided the caustic used will penetrate into the diseased tissue and produce a slough. Some think that bromine has a peculiar tendency to invade diseased structures. In the selection of a caustic, that which is most manageable and causes least pain, other things being equal, should be preferred. Nitric acid is more easily applied, more under our control, less likely to cause injury to surrounding structures, and causes less pain. Whatever kind be used, it must be applied thoroughly, must be brought into contact with every particle of diseased structure, and must be prevented from coming in contact with and injuring healthy tissues. If the amputation is to be performed when the disease has not extended up to the vaginal attachment, I consider no instrument so well adapted to the removal of the cervix as Wathen's serrated scissors. By its use hemorrhage is prevented and

union of the cut edges occurs. After the amputation you may unite the intra- and extra-cervical mucous membrane, just as you would in amputation of the cervix for any other cause. When the disease has extended above the infra-vaginal cervix into the tissue of the supra-vaginal part, or through the internal os, then, of course, no amputating instrument will be available, and the proper procedure is to tear or cut this tissue away with the scoop, forceps, tenaculum, or scissors, or by any means, until all, if possible, is removed. In these instances it is difficult to cut away all the diseased structures, and you must be very careful not to invade adjacent organs or cavities. The disease often extends through the cervix almost out to the peritoneal investment, and unless you practise great care there is danger of cutting through into the peritoneal cavity. It is often better first to take the scissors and afterwards some sort of scoop or curette. On account of the severe hemorrhage that often complicates this operation, some instrument should be devised to accomplish this purpose better than any we have at present. If we had a scoop with evenly and sharply serrated edges, we could remove this tissue just as easily as if the edge was only sharp, and thus be able to prevent the hemorrhage to a considerable extent. So I would recommend a scoop somewhat similar to that devised by Prof. Thomas for the removal of uterine fibroids. With this you should continue carefully to remove the diseased structure until you have taken, if possible, every particle away. You can always detect if any remains, because it feels hard and gristly.

During the operation we must always be prepared for hemorrhage, and it is well to have two or three pairs of catch-forceps by which to pick up the little arteries as they begin to bleed. You ought to have several whalebone bougies or sounds wrapped with cotton and dipped in a saturated solution of alum or diluted Monsel's solution, which may be introduced into the uterine cavity, plugging the cervical canal if necessary. The operation should be performed as rapidly and with as much facility as possible. When it is over, if the hemorrhage is profuse you will have to control it by the application of styptic cotton. If it is not profuse, you may apply your caustic at once; in other words, if you can control the hemorrhage and bring

the parts into a dry condition, you may then at once apply the cautery.

Often a little pledget of cotton wet in the persulphate of iron solution, or in a saturated solution of alum, and packed into the canal, will control it. If not, you may apply a number of vaginal pledgets wet in a weak solution of carbolic acid, so that the vagina is thoroughly and perfectly filled by the cotton. If the hemorrhage continues, you must remove the cotton and reapply the styptic and tampon. After twenty-four hours you may remove the lower third of the tampon. After the second day you may remove all, except that part in the cervical canal, which should be left in position until suppuration is set up and it is separated by that means. If you attempt to remove it by force, it being firmly adherent to the surface, there will be danger of furious hemorrhage. After the tampon has all come away, you must apply your caustic. If you select the chloride of zinc, it should be made in a strength of one drachm of the chloride to two of water, or of equal parts; or you may use bromine dissolved in alcohol, from one part to ten to one part to five; or you may use a saturated solution of sulphate of zinc, or pure fuming nitric acid. It is generally not necessary to use the chloride of zinc in greater strength than one part to two, or the bromine stronger than one part to ten of alcohol. When you use the bromine or the chloride of zinc, you should first wet your pledgets of cotton in the solution and squeeze them nearly dry, and then place them up in the cavity in contact with every part of the raw surface, in the form of a tampon. You now apply a cotton tampon wet in a solution of bicarbonate of sodium, so as to neutralize the bromine or chloride of zinc that may come out into the vagina. This has not the power of neutralizing it completely,—there is nothing known that will do so,—but in default of anything more effective we use this. Unless the precaution be taken to do this, the caustic may cause decided injury to the vaginal mucous membrane, and several days afterwards, when you remove the tampon, you will find the vagina hardened and contracted. The pain after the application is oftentimes very intense, requiring large doses of opium or morphia. Ordinarily we now have the pain nearly entirely under control by the hypodermic injection of morphia.

During this treatment the patient should be kept in the horizontal position. After thirty-six or forty-eight hours the tampon may be removed from the vagina; and again be careful not to disturb the little pledgets of cotton in the cervical canal upon which you have placed the caustic. Let them remain until suppuration has occurred, and they will of themselves come away in the course of four or five days. After they have come away you will find the surface of a dry, grayish color, and in the course of a few days you will have a slough coming away about one-sixteenth of an inch in thickness, leaving a healthy granulating surface, which will heal under the use of weak injections of carbolized water. You can bring the nitric acid directly in contact with every particle of the raw surface without injuring any of the healthy structures. You can apply it by wrapping a whalebone bougie or dresser with cotton, dipping it in the acid, and applying it up in the uterus, bringing it into contact with every part of the raw surface. You can have a solution of bicarbonate of sodium ready, so that if any of the acid comes in contact with healthy tissue it is immediately neutralized by the soda. As soon as the caustic applicator is withdrawn, introduce into the cervical canal another that has cotton wrapped around it and wet in a solution of bicarbonate of sodium, so it neutralizes any superabundance of the caustic within the canal. You may also pour the solution into the vagina, and in this way neutralize the acid. I have had no difficulty at all with the nitric acid, and have found it to produce no great amount of pain, and after it is used it leaves the surface in a healthy, granulating condition. Here it is proper to call your attention to the necessity of being very careful in operating upon and tamponing the cervical canal and uterine cavity, especially when the disease has extended out nearly to the peritoneal covering of the uterus. There are instances where the instrument in the operation has cut through the peritoneal coat of the uterus, also where the cavity was tamponed so tightly as to cause rupture directly through the walls; again, where this has not occurred, the circulation has been cut off, causing sloughing of the tissues. Be careful, then, not to press it in so tightly as to cause, either primarily or secondarily, an opening through the uterine tissue into the peritoneal cavity.

ORIGINAL COMMUNICATIONS.

THE TREATMENT OF DYSMENORRHOEA BY ELECTRICITY.

BY WM. R. D. BLACKWOOD, M.D.,

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(Read before the Philadelphia County Medical Society, Sept. 8, 1880.)

I HAVE often wondered how the idea became so universally prevalent among intelligent women that pain is an essential phenomenon of menstruation. Dysmenorrhoea is a wide-spread and intractable malady, and its treatment presents many difficulties to all practitioners, and insurmountable ones to those who are unskilled in surgery, for it is merely a symptom of abnormal uterine or ovarian condition, which, as ordinarily treated, requires mechanical correction in the majority of cases.

Four varieties may be conveniently recognized, although each author you consult may differ on this point. The first in frequency in my own cases is the *neuralgic*, which may be either ovarian or uterine in origin, and here pain is not confined to the pelvic organs, but invades other and distant regions, and is sharp and knife-like, with paroxysmal attacks of acute suffering. The higher class of patients, especially those young ladies who are popularly supposed to be "finishing their education," supply the greater number of such cases.

Next we have the *congestive* variety, found in those affected with coexisting uterine disorder of other type, caused by impeded circulation through direct or indirect pressure on the pelvic viscera, owing to errors in dress, habit, or occupation. Here the pain is dull, heavy, and aching, and is ordinarily confined to the pelvis and lumbar region. Married women who have had a bad "getting-up" after confinement, or who have repeatedly miscarried, are apt to be found in this class, which is second in frequency.

The third group includes the cases in which some *mechanical* obstruction exists, such as flexion or cervical stenosis. With this type we have pain preceding the appearance of the flow, and the suffering is intense. Establishment of the discharge usually greatly mitigates or abolishes the agony endured by this class. It may exist in single or married women, and in the latter it is generally accompanied by sterility.

The last and least frequent variety is the *membranous*. In this class the suffering is severe and continuous, ceasing only upon denudation or detachment and expulsion of the membrane through a forcible dilatation of the cervical canal either by surgical assistance or by the unaided effort of nature. The variety is, in my belief, rare, my own experience being limited to a single typical case, although practitioners have told me that they often meet with well-defined examples.

Many methods of treatment have been advocated, some entirely surgical and heroic in plan, others wholly medical, with frequently illogical leanings. All of them are liable to fail at times, and thus the prognosis is rendered doubtful. Any addition to our armamentarium under such circumstances is acceptable; and, if it presents evidence of value, a thorough trial should be accorded it,—not by a few, but by all who profess to treat this immensely difficult and common complaint.

No one agent, nor any series of combined remedies, has been so successful or so satisfactory to me as electricity in the treatment of all varieties of dysmenorrhœa; and yet, in view of the undeniable power to *relieve pain* of whatever kind which this invaluable therapeutic agent is known to possess, its employment has here been singularly neglected even by those who make medical electricity a specialty. In looking over a dozen works on electrotherapeutics I have found in them few subjects which have received less attention, and many comparatively trivial ones which have had much more. My own ideas on the merits of electricity are resultant upon a closely observed list of carefully recorded examples now numerous enough to afford stable ground for the statement made. As many of these cases date back fifteen years, and as the greater number of them have remained under my care during that period, I have had ample opportunity of watching the permanence of the results obtained,—a matter of exceeding importance, for a goodly proportion of them had been more or less benefited by treatment at the hands of physicians before coming into my charge, the improvement in their condition, however, being transitory. Among my earliest patients, and one of the worst to manage, was a lady whose case may be briefly stated.

Miss H. menstruated for the first time dur-

ing her fourteenth year, being at that time a nervous, undeveloped girl. She had much pain periodically before menstruation was established, and this increased until she was compelled to spend the first three days of each period in bed. When I first saw her she was in her twenty-ninth year, and had endured fifteen years of martyrdom; for, although the dysmenorrhœa troubled her one-fifth of each month, she required almost all the rest to recover any degree of tone and comfort,—a miserable life to lead. She had been under varied professional care, with now and then very slight relief, before seeing me. She had undergone two attacks of pelvic cellulitis, undoubtedly resultant from the use of a stem-pessary, and naturally, therefore, she dreaded any local treatment. I found a sharp retroflexion, tender ovaries, irritable bladder, weary spine, feeble digestion, diffused neuralgia,—in short, a wreck.

With coaxing and careful method I went through the usual plans in vogue and somewhat relieved her general health. Tonics enriched her blood; massage of the abdomen and regular effort relieved her constipation; sun-baths with friction of the entire body brightened her spirits; but no amount of work of any kind relieved her flexion, and her monthly pain was nearly as bad as ever. I tried hard for eleven months to do her justice, and became thoroughly disheartened at my failure. One evening, when I had almost decided to throw up the case, she asked me why I did not try electricity, as I had with a friend of hers. I explained to her the difference between the cases, and doubted the advisability of employing the battery; but, for curiosity, I faradized her uterus and repeated the treatment daily during the week preceding her monthly period. Her menses appeared punctually, as they always did, but, for the first time in her life, *entirely without pain!* She was unwell eight days, an increase of two days in duration, and lost considerably more blood than at any previous time in her recollection. This peculiarity did not again happen; and I may here say that the phenomenon alluded to is not uncommon under electrical treatment, and it is usually confined to the first period. The flow is also frequently hastened, coming on a day or so too soon in some instances, or even a week anticipatory of the expected date. The regular course is, as a rule, thereafter at the habitual interval.

One week subsequent to the cessation of her menstruation I placed her under treatment again, using the induced current twice a week until the week before the next period, when the applications were made every second day. The result was precisely as before,—no suffering whatever. Nothing aside from electricity was administered. I now proposed discontinuing treatment, but she would not hear of it; and consequently the sittings were prolonged for the ensuing three months, when I insisted upon their cessation. She had by this time become a very different person in feeling and appearance. For fourteen months thereafter she had no difficulty whatever; but, owing probably to a wetting in a summer storm, she had a slight recurrence of uterine pain, and at once demanded a renewal of the applications. Keeping her under care a couple of months sufficed, and for many years she has been a thoroughly healthy and grateful lady. The flexion still exists, but is decidedly less rigid; yet all other difficulties are abolished.

The case just related made a deep impression on my mind, and also started a train of others which gave further material for experiment. One of these was that of Miss R., a young lady nineteen years old, and a habitual sufferer. She was stout beyond the average, and had a congested uterus and leucorrhœa, with the usual attending symptoms. I tried leeching, scarification, and glycerin tampons to the cervix, applications of carbolic acid and iodine to the cervical canal and to the fundus in the intervals, together with full dilatation just before the period, associated with appropriate constitutional measures. Three or four months of similar manipulation helped her a little, but not much. Without losing more time, faradization was commenced, and improvement was decidedly established. Three months of bi-weekly applications cured her without any accessory therapeutic measures. She is a type of a numerous list in which similar results were attained.

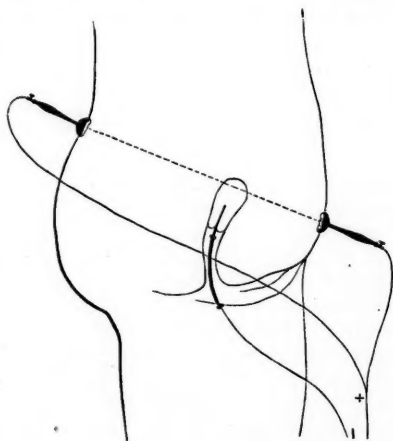
Miss A. is a good example of the first class,—the nervous or neuralgic. She endured very severe local pain throughout her period, with associate facial and mammary neuralgia. Her womb was free from flexion, displacement, or congestion; the flow was promptly established at the proper time, and was normal in amount and dura-

tion; yet she was fast becoming a confirmed invalid. The list of antineuralgics was fully tested; phosphorus, cod-liver oil, malt, and such like brain-foods were pushed; but the sole relief was morphia hypodermically and in full doses. Induced currents were begun, and relief at once was had. Nevertheless, the desired result was not fully secured. Galvanism was therefore substituted, and soon thereafter the victory was complete. In all purely neuralgic cases, as in this, I have found galvanism notably superior to faradic electricity, especially in clinching the business after an impression has been made.

Mrs. F., an old personal friend, consulted me after considerable reluctance from excessive modesty, and she afforded me, as previously stated, the only opportunity I have had in twenty years of seeing a case of pure so-called membranous dysmenorrhœa. She suffered extremely from the commencement during four days, when the entire womb-lining would be discharged. She had dysmenorrhœa and endured decided cerebral congestion during the period. I had by this time a high opinion of the utility of electrical measures, and she went into training at once. Galvanism was tried first, but had much less good effect than faradization, which relieved the pain considerably and decidedly increased the molimen menstruale. The progress not being rapid enough to please me, and learning that various-liquid caustic applications had been unsuccessfully employed before I took charge of her, I thoroughly cauterized the canal up to the fundus with the galvano-cautery, with a view of modifying the condition of the endometrium. This was done half-way between her periods twice in succession. The suffering was lessened very perceptibly, and she was thereafter kept upon tri-weekly faradizations of the uterus, with general and central galvanization. Her trouble steadily diminished, and in a year after commencing treatment she was almost entirely free from discomfort, with vastly-improved general health, and is now approaching the menopause with satisfaction to both doctor and patient. While I am willing to admit that the cauterization may have been an important factor, the failure of other caustic remedies in capable hands before I treated her, and the steady improvement under electricity alone, force me to believe her superb health thereafter,

as compared with her miserable condition previously, to be due without doubt to the treatment under consideration.

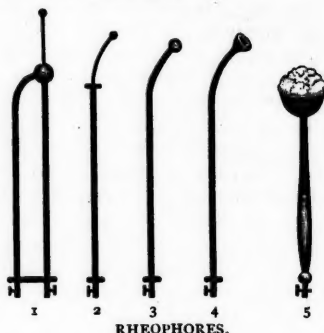
Electrization of the uterus or ovaries must be accomplished by *direct* applications. The plan usually adopted of sending the current through the abdomen by placing one rheophore upon the hypogastrium and the other over the sacrum is useless, the current traversing almost entirely the skin and parietal muscles, especially in faradization. The better method is to use a bifurcated conducting cord for one pole, to which two sponge-holders are attached, one of which is applied to the hypogastrium and the other to the lumbar spine.



The other pole is then applied, through suitable rheophores, to the exterior of the cervix, to the cervical canal at any desired point, to the fundus, or to the ovary, which can be reached near enough by pushing the instrument well up on either side of the cervix. In retroflexion or version, one rheophore may be applied through the rectum, and in antero-displacement it can be directed through the bladder; but I have never tried this latter method as yet. The instruments which I exhibit are well adapted to fulfil the various indications.

No. 1 is intended to confine the current to the uterus alone. It enters through the straight rod (which is insulated its entire length), escapes at its upper uninsulated point, and, passing through the body of the womb, returns through the large uninsulated ball at the cervix and the curved rod to the battery. The intra-uterine rod is movable, to suit long or short canals. No.

2 is a modified sound, insulated all except the curved intra-uterine part, and is used in connection with No. 5, which is an ordinary sponge rheophore. No. 3 is a ball electrode, intended for applications to the os uteri or ovary, and No. 4 is armed with a cup instead of the ball within which the cervix is engaged. The ball and cup only in either are uninsulated.



RHEOPHORES.

To secure good results, the batteries and accessories must be of *good make* and kept in *good order*. For the constant or galvanic current the Electropoion or Leclanche cell is preferable. A very serviceable battery of my own design was described in the *Medical and Surgical Reporter* of July 31, 1880, which can be made by any one of moderate mechanical skill at a very low cost, and illustrative cases of its utility have been published at different times during the last four years in that journal.

The faradic instrument may be of any manufacture in which smoothness of current is secured. To run the coil without sudden jars, large-quantity cells are demanded, such as the Grenet, which is at once simple, durable, and easily managed, or the Smee. No true polarity, of course, exists in induction-currents as found in ordinary apparatus, except in the elegant machine of Mottershead & Co., of Manchester, England. The difference of intensity in the initial and terminal currents of an inductorium, the first (during closure of the primary coil) being the weaker, and the second (whilst it is open) the stronger, has been ingeniously balanced by Kidder, of New York, and equal alternating currents secured; but the expense is in excess of the utility. Whilst the direction is a matter of no moment in faradism, galvanic currents, which are definite

in direction, appear to produce differing results according as they are ascending or descending. In neuralgic cases the rheotome is necessary, and more or less frequent reversion of the current heightens its value; while in congestion a steadily downward and uninterrupted flow is apparently the better plan. A most valuable but neglected method in neuralgia, not alone of uterine origin but of all types, is the use of *static* electricity, from the Holtz or Bertsch machine, which will often succeed after failure of all other proceedings.

Time will not at present permit any explanation of the *rationale* of electro-therapeutics as applied against dysmenorrhœa. There is, however, nothing empirical in this method of treatment, although superficial reasoning might lead to the idea that radically diverse conditions cannot be relieved by one and the same procedure. A little reflection will show that the action of many prominent drugs is at times diametrically opposite in effect; as, for instance, opium, quinia, and belladonna. At a future time this branch of the subject may be taken up.

The examples given of successful treatment can be multiplied, except only in the membranous variety. My object in this paper is not to decry other measures or to find fault: it is to enlist interest in a method at once simple, reliable, and effectual, though woefully neglected, probably because professional knowledge of electricity is largely confined to faradic currents from machines of doubtful construction and utility. Thus limited failure is inevitable, for galvanism is indispensable in many cases, in my belief, although such high authority as Duchenne has insisted on the availability of induction-currents in all instances and in all diseases for which electricity is employed.

The study of electro-therapeutics demands time and patience. All its branches must be explored and mastered in their details. Lack of care in looking after batteries is a common fault. They are allowed to rust and eat themselves up between-times, and, necessarily failing to work properly when needed, they are shortly consigned to oblivion, and electricity is thereafter a humbug! If more thought were given to the matter, the added therapeutic power thus obtained would make the physician the master of disease where now he is frequently impo-

tent, and one of the most useful servants we possess—if not the best—would be, in the hands of intelligent gentlemen, a boon to the suffering, whilst at present it lies disgraced from being relegated to quacks and impostors.

246 NORTH TWENTIETH STREET.

A NEW MYDRIATIC.

BY HENRY S. SCHELL, M.D.,

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HOMATROPIN hydrobromate, manufactured by E. Mercke, of Darmstadt,* bids fair to be a very valuable addition to the resources of the ophthalmologist. Heretofore, in the treatment of iritis and other ocular complications, and in examination of difficulties of refraction, reliance has been placed almost wholly upon atropia and duboisia. Both of these are, indeed, invaluable, but both, nevertheless, have some properties which often render their use inconvenient, and even distressing.

Atropia sulphate, for instance, when used daily for some length of time, occasionally produces a granular condition of the tarsal conjunctiva, which inflames the cornea and sadly interferes with recovery. When used to suppress the accommodation, during an inquiry into the state of the refraction, the effects of a single application often last for ten days, and, in consequence of the dilatation of the pupil and the inability to focus the eye upon near objects, the patient remains for that length of time practically blind so far as reading, writing, or other close occupation is concerned, and subject also to the well-known disagreeable feelings attendant upon the entrance of a flood of light into the unguarded eye. In addition to this, so large a quantity of the drug is often required to produce the desired local effect that the general system becomes involved, and the patient suffers from constant dryness of the throat and mouth, flushing of the face, acceleration of the circulation, feelings of languor, and even from nausea and vomiting.

Duboisia sulphate is more convenient for use in examinations of the refraction, as its action is quicker and its effects sooner over. These last only about one-

* Imported by Henry C. Blair's Sons & Co.

half as long as those of atropia. But in the use of duboisia, also, we are often obliged to employ so much locally that the patient is made to feel giddy, sometimes to such an extent that it is unsafe to let him go into the streets alone for an hour or more.

Homatropin promised so much better results that I was led to make with it the following series of experiments:

Exp. I.—W. T., aged 43, had been accustomed for a year or two to wear $+1\frac{1}{2}$ for reading or writing. Left eye tested. With $+1\frac{1}{2}$ can read 1½ Sn. at 11". Diameter of pupil 3 mm. 9.16 A.M., instilled two drops of a four-grain solution of homatropin hydrobromate. Patient complained that it produced a slight stinging sensation. There is a little reddening of the conjunctiva.

9.27 A.M., instilled two drops.

9.35 A.M., with $+1\frac{1}{2}$ reads No. 3 Sn. at 14". Pupil 5 mm.

9.40 A.M., with $+1\frac{1}{2}$ reads No. 3½ Sn. at 14". Pupil 8 mm. With $+1\frac{1}{2}$ S \subset $+1\frac{1}{2}$ C, axis 90°, $V = \overset{20}{XV}$?

The next day, at 9 A.M., with $+1\frac{1}{2}$ read No. 1½ Sn. at 14". Pupil 4 mm. Reported that he could see to read and write with comfort at 2 P.M. of the day before.

Exp. II.—M. F., aged 18, a strong, healthy girl. Ophthalmoscopic examination through the undilated pupil disclosed hypermetropia of at least $\frac{1}{8}$. Right eye, $V = \overset{20}{XXX}$? Reads D. 50 Sn. from 13 to 40 cm. Pupil 3 mm.

11.40 A.M., instilled two drops of homatropin hydrobromate, four-grain solution.

11.45 A.M., two drops.

11.50 A.M., reads D. 50 Sn. from 17 to 48 cm. Pupil 3 mm.

11.55 A.M., two drops.

12 M., reads D. 50 Sn. from 18 to 42 cm.

12.5 P.M., two drops.

12.10 P.M., cannot read. Pupil 6 mm.

$V = \overset{20}{C}$.

12.15 P.M., two drops.

12.20 P.M., pupil 7 mm. $V = \overset{20}{C}$?

12.25 P.M., two drops.

12.30 P.M., pupil 8 mm. Slight congestion of conjunctiva. $V = \overset{20}{CC}$.

12.35 P.M., two drops.

12.45 P.M., two drops. Patient complains of some smarting in the eyes.

12.50 P.M., $V = \overset{20}{CC}$. With $+1\frac{1}{2}$ S $V = \overset{20}{XXV}$.

The next day, at 9.30 A.M., she read D 1.25 Sn. at 15 cm.

The following day two drops of an eight-grain solution of atropia sulphate were instilled.

An hour after $V = \overset{20}{CC}$. With $+1\frac{1}{2}$ $V = \overset{20}{XXV}$.

This case demonstrated the difficulty of entirely overcoming the accommodation,

in high degrees of hypermetropia, with a weak solution of the mydriatic. It is evident, however, that sufficient time was not allowed to elapse after the final instillation before the test was made of the total hypermetropia. It is probable that twenty minutes later the testing would have agreed with that determined two days later under atropia.

Exp. III.—Miss C. V. C., aged 27, a weak and nervous lady, with a quick, irritable pulse.

Right eye, $V = \overset{20}{XXXV}$. Left eye, $V = \overset{20}{XXV}$. Reads 1½ Sn. at 6½", nearest point of distinct vision. Pupil 4 mm. Experiment made with an eight-grain solution of homatropin. 9.46 A.M., one drop put in each eye; 9.48, one drop each; 9.50, repeat; 9.52, repeat. No smarting complained of. Conjunctiva not reddened. Dilatation of pupil commenced at 10 A.M. 10.8, pupil 7 mm. Smallest type which can be read, No. 3½ Sn.; near point 11". 10.10 A.M., reads 1½ Sn. with $+1\frac{1}{2}$ at 8"; therefore Ac. $\frac{1}{4}$. 10.20, pupil 8 mm. $V = \overset{20}{XXXV}$.

Right eye, $+1\frac{1}{2}$ S \subset $+1\frac{1}{2}$ C, axis 90°, $V = \overset{20}{XV}$.

Left eye, $+1\frac{1}{2}$ S \subset $+1\frac{1}{2}$ C, axis 90°, $V = \overset{20}{XV}$.

She appeared quite well when she left my office, at the close of the experiment, and denied feeling any dryness of throat or other unpleasant symptoms. She did not reappear, however, until the day but one following, when she stated that she had suffered much from dryness of the throat and lips, headache, and nausea during the entire interval. As her menses, however, had also returned, it is possible that some of the symptoms may have been natural enough under the circumstances. She stated that she could see to read the day after the eyes had been tested, and, upon examination, I found that she could again easily read No. 1½ Sn. at 6½".

Exp. IV.—B. H., aged 17, a muscular young man. The ophthalmoscope showed a high degree of compound myopic astigmatism. Near point for No. 1 J, was 3". Pupils 3 mm. Four drops of an eight-grain solution were placed in each eye at 8.45 A.M. At 8.55 his pupils measured 4 mm., and his near point had receded to 6". At 9.15, pupils 8 mm.; near point 6". The error in refraction of the right eye was found to be corrected by $-1\frac{1}{2}$ S \subset $-1\frac{1}{2}$ C, axis 165°, $V = \overset{20}{XXXV}$; left eye by $-1\frac{1}{2}$ S \subset $-1\frac{1}{2}$ C, axis 180°, $V = \overset{20}{XXXV}$.

In this instance the weak ciliary muscle quickly gave way under the influence of the mydriatic. The iris responded less readily. No unpleasant local or general effects were observable.

Exp. V.—A. M., a healthy girl of 15. She had suffered from asthenopia, and I had

examined her right eye a few days before under atropia, with the result of determining an error of refraction, which was accurately corrected by $-\frac{1}{2}$ c, axis 90° . Upon this occasion the left eye was examined. $V = \frac{20}{XX}$. Near point for No. 1 J. 5 in. Pupil 5 mm. 9.40 A.M., two drops of eight-grain solution; 9.42, two drops; 9.50, reads as before; pupil 6 mm. Slight congestion of conjunctiva and sense of smarting in the eye. 10.10 A.M., pupil 7 mm.; reads $2\frac{1}{2}$ Sn. not nearer than $8''$; $V = \frac{20}{XX}$. Repeat drops. 10.20 A.M., same condition. Repeat drops. 11 A.M., reads No. 12 J. at $11''$; $V = \frac{20}{XX}$. Repeat drops. 11.30 A.M., $V = \frac{20}{XXV}$. With $+\frac{1}{8}$ c, axis 180° , $V = \frac{20}{XII}$. The next morning, at nine o'clock, it was found that she could again read $1\frac{1}{2}$ Sn. readily, and that she had suffered no inconvenience from the drug.

Exp. VI.—W. S., a gentleman of 31; looks delicate; an artist by profession. Had suffered from asthenopia, in consequence of which I had examined his right eye a week previously, under the influence of duboisia sulphate, and found an error of refraction, which was corrected by $+\frac{1}{8}$ s. $\odot +\frac{1}{8}$ c, axis 90° . $V = \frac{20}{XII}$. Left eye, $V = \frac{20}{XXX}$. Near point for No. 1 J. at $5''$. Pupil 5 mm. 10.05 A.M., instilled four drops of an eight-grain solution of homatropin. 10.10, repeat. No smarting or congestion of conjunctiva. 10.30, cannot read No. 1. Reads $3\frac{1}{2}$ Sn. at $24''$. Pupil 7 mm. $V = \frac{20}{XXXV}$ with $+\frac{1}{8}$ c, axis 105° . $V = \frac{20}{XII}$. 10.45, repeat instillations (four drops). 11.15, same results. The next day at 9 A.M. he read $1\frac{1}{2}$ Sn. at $13''$ with difficulty, No. 2 with ease at $12''$, with left eye. Pupil 6 mm. He complains that he was awakened in the night by neuralgic pain in the left eye, extending over the temporal region of the same side. The pain had continued, with increasing intervals of relief, to the time of his visit, when there was but little left. He had had a similar attack in the right eye after the use of the duboisia, but not so severe. On the following day he reported that the pain had quite disappeared by 2 P.M. of the day previous.

The large quantity—twelve drops—used in this case probably caused the attack of pain,—an attack which may hint at a glaucomatous tendency in the individual, and, at any rate, serves as a warning note in that direction. There were, however, none of the other signs present which characterize the glaucomatous condition.

Owing to the inconvenience in practice connected with the use of so large a number of drops in the eye, the strength

of the solution was doubled, and the following experiments were made with a liquid containing sixteen grains to the fluidounce of distilled water.

Exp. VII.—L. W., a girl of 8 years. Has difficulty in studying on account of her eyes. $V = \frac{20}{XXV}$ in each. Examined by means of the undilated pupil, the ophthalmoscope shows a hypermetropia of at least $\frac{1}{10}$ in each. The smallest print she can read is $5\frac{1}{2}$ Sn., near point, with both eyes, $4''$. Pupils 4 mm. 4.15 P.M., one drop in each eye. 4.23, repeat. No smarting or suffusion of the conjunctiva. 4.45, pupils 8 mm. $V = \frac{6}{CC}$ each; with $+\frac{1}{8}$ $V = \frac{20}{XXV}$. As there was a possibility that this was not the total hypermetropia, one more drop was put in each eye at 5 P.M. 5.30, pupils as before, with $+\frac{1}{8}$ $V = \frac{20}{XXV}$ in each eye. There was no dryness of throat or other unpleasant symptoms, although this child received a fifty per cent. larger dose of homatropin than the lady mentioned in Exp. III. At 9.25 A.M. next day she could again read $5\frac{1}{2}$ Sn. at $6''$ with the naked eyes. $V = \frac{20}{XXV}$. Pupils 7 mm. To make assurance doubly sure, I instilled one drop of an eight-grain solution of atropia sulphate in each eye, and examined them both again at the expiration of an hour, with the same result as that obtained on the previous day.

Exp. VIII.—W. G., a robust gentleman of 45 years. Eyes had commenced to fail in reading. Reads $1\frac{1}{2}$ Sn. at $15''$ with both eyes. Pupils $2\frac{1}{2}$ mm. Right $V = \frac{20}{XVIII}$. Left $V = \frac{20}{XXV}$. 10.7 A.M., put two drops in each eye; followed by slight congestion of the conjunctiva. 10.19, repeat drops. More congestion. 10.22, reads $3\frac{1}{2}$ Sn. at $24''$. 10.25, reads $6\frac{1}{2}$ Sn. at $24''$. 10.45, right $V = \frac{20}{LX}$. Left $V = \frac{20}{XC}$. Right $+\frac{1}{8}$ s. $V = \frac{20}{XII}$. Left $+\frac{1}{8}$ s. $\odot +\frac{1}{8}$ c. $75^\circ V = \frac{20}{XII}$. Pupils 6 mm., and immovable. 11 A.M., one drop in both, to ascertain if any hypermetropia is still latent. 11.30, results as before. At 10 A.M. next day irritation of conjunctiva had disappeared. With correcting-glasses reads $1\frac{1}{2}$ Sn. at $15''$. Pupils 5 mm. Right eye $V = \frac{20}{XXV}$. Left eye $V = \frac{20}{XXX}$.

Exp. IX.—B. J., a girl of 14 years. Has difficulty in reading. Right eye $V = \frac{20}{IX}$. Left eye $V = \frac{20}{C}$. Reads nothing smaller than $2\frac{1}{2}$ Sn. Near point $5''$. Pupils 6 mm. 9.26 A.M., one drop in each eye. 9.28, repeat. 9.30, repeat. 10.02, right eye $V = \frac{20}{C}$. Left $V = \frac{20}{CL}$. Pupils 8 mm. Right eye

with $+ \frac{1}{80}$ s. $\odot - \frac{1}{80}$ c., axis 180° $V = \frac{20}{XXV}$.
Left eye with $+ \frac{1}{20}$ s. $\odot - \frac{1}{80}$ c., axis 180°
 $V = \frac{20}{XXV}$. 10.40 A.M., applied one more drop
to each eye. 11.15 A.M., refraction as before.
No dryness of the throat. No congestion of
conjunctiva.

The next day, at 9 A.M., she read 2½ Sn. at
6" with the unaided eyes. Pupils 6 mm.
Has had no dryness of throat or other dis-
comfort.

Exp. X.—M. F., a school-girl, 15 years of
age. Right eye $V = \frac{20}{XX}$. Reads D. 1 Sn.
at 9.64 cm. as near point. Pupil 3 mm. A
four-grain solution used; seventeen drops
put in the eye, at the rate of one per minute.
Smarting and congestion of conjunctiva pro-
duced.

The accommodation began to yield with the
eighth drop,—that is to say, at the end of eight
minutes. Total suppression was not ob-
tained, the amount of the mydriatic used not
being sufficient. The pupil attained its maxi-
mum dilatation, 8 mm., in twenty-three min-
utes after the first drop was applied.

Exp. XI.—This experiment was made with
the last-mentioned patient, and two days later
than the previous trial. Its object was to
determine how soon after complete paralysis
the ciliary muscle commenced to regain its
powers. A four-grain solution was used.
Two separate instillations, of ten drops each,
were made in the right eye, the first at 7 A.M.,
and the other at 7.30 A.M. 8 A.M., $V = \frac{20}{L}$.
Ac. = O. H. = $\frac{1}{80}$. 9 A.M., $V = \frac{20}{L}$. 10.30
A.M., $V = \frac{20}{XL}$. 11 A.M., $V = \frac{20}{XXX}$. 2 P.M.,
 $V = \frac{20}{XXV}$. 6 P.M., $V = \frac{20}{XX}$.

The accommodation, therefore, commenced
to reassert itself in three hours from the time
of the last instillation, and was fully restored
in ten hours and a half, for at six o'clock she
could read D. 1 Sn. at 10 cm.

These experiments appear to justify the
following conclusions:

1. Homatropin hydrobromate is not well adapted to the treatment of inflammatory or traumatic affections of the eye, on account of the conjunctival irritation it produces.
2. It is especially adapted to the production of that temporary dilatation of the pupil and paralysis of the ciliary muscle which is so often required in examining the condition of the refraction.
3. The best solution to use is one containing sixteen grains to the fluidounce of distilled water. From one to five drops of such a solution may be required to produce the desired effect, according to the strength and activity of the ciliary muscle.

4. Under the influence of a full dose the pupil attains its maximum dilatation in about twenty minutes.

5. With a full dose the accommodation begins to fail in about ten minutes and is usually totally suppressed in a half-hour, although exceptional cases may require an hour. This total suppression lasts about three hours; the accommodation then gradually recovers itself, and is fully in action again at the end of from ten to thirty hours from the time of the last instillation.

6. The local action of the mydriatic is not accompanied by any unpleasant effects upon the general system.

ON SCLEROTOMY IN GLAUCOMA.

BY M. LANDESBURG, M.D.,

Philadelphia.

OF all operative procedures which have been devised in order to supplant iridectomy in glaucoma, sclerotomy is the only one which deserves our consideration. By sclerotomy we are to understand a distinct operation, which consists in making a section of the sclera at the sclero-corneal border, without excision of the iris, avoiding the prolapse of the latter. Sclerotomy I have performed with section in the sclero-corneal border, as if about to make a scleral flap for linear extraction of cataract. In the majority of cases I left a scleral bridge; in some instances the section was completed and a conjunctival flap formed. The section was made with Von Graefe's knife, in the most cautious manner, in slow, drawing motions of the knife, which was cautiously withdrawn, allowing the aqueous humor to escape, but very slowly. A compressive bandage on both eyes was applied until the wound was perfectly closed. Instillations of extract of calabar or of eserine were freely used, both before and after the operation, in order to bring about the utmost contraction of the pupil. In no case have anæsthetics been administered.

Of the thirty-five cases of glaucoma in which I performed sclerotomy, there were

7	cases of glaucoma simplex;
10	" " subacutum;
2	" " acutum;
1	case of " fulminans;
5	cases of " inflammatorium chronicum;
10	" " absolutum.

The result of the operation in the different forms of glaucoma was as follows:

A.—GLAUCOMA SIMPLEX.

(The most insidious form, which sets in and takes its course without any inflammatory symptoms; a form in which iridectomy also often fails to check the morbid process.)

In one case the primary result was very favorable. Intraocular pressure and pupil became normal, and vision increased from $\frac{1}{10}$ to $\frac{1}{8}$; but after three months glaucomatous attacks again set in.

In another case, in which iridectomy made five months before was of no avail, sclerotomy succeeded in checking the morbid process; but intraocular pressure remained pathologically increased, and vision did not improve.

In two cases intraocular pressure became normal, but pupils remained dilated, and vision decreased from $\frac{1}{10}$ resp. $\frac{1}{20}$ to $\frac{1}{20}$ resp. $\frac{1}{10}$.

In one instance the operative intention did not succeed. Prolapse of iris occurred during section, which necessitated iridectomy.

In two cases there was complete success. Intraocular pressure became normal, pupils of good reaction, and vision increased from $\frac{1}{10}$ resp. $\frac{1}{8}$ to $\frac{1}{5}$ resp. $\frac{1}{8}$.

B.—SUBACUTE GLAUCOMA.

In one case sclerotomy caused immediate decrease of intraocular pressure, but acute glaucoma set in during the healing process, which necessitated iridectomy.

In two cases intraocular pressure did not decrease consequent upon the operation. Hemorrhages repeatedly occurred; wound burst, causing prolapse of iris. Iridectomy checked the morbid process in one instance; in the other, the final issue was phthisis of the eyeball.

In one case the result was very favorable. Intraocular pressure became almost normal, and vision increased from $\frac{1}{10}$ to $\frac{1}{8}$.

In two cases, of which in one instance iridectomy had been made six weeks before without any avail, a small prolapse of iris occurred during section, the reposition of which, however, succeeded perfectly. The result was very good. Intraocular pressure became normal, and vision increased from $\frac{1}{10}$ resp. from counting fingers at 9' to $\frac{1}{10}$ resp. $\frac{2}{10}$.

In two cases prolapse of iris occurred during section, the reposition of which did not succeed. Iridectomy was performed.

In one case, in which the glaucomatous process reappeared in spite of two iridectomies, sclerotomy brought perfect success. Intraocular pressure became normal, and vision increased from counting fingers at 5' to $\frac{5}{10}$.

In one case, in which I had performed iridectomy for acute glaucoma eleven months before, sclerotomy gave a perfect result. Intraocular pressure became normal, and vision increased from $\frac{1}{10}$ to $\frac{2}{10}$.

C.—ACUTE GLAUCOMA.

In a case of acute glaucoma consequent upon serous iritis, sclerotomy brought perfect recovery, with restitution of normal vision.

In a case of genuine acute glaucoma, sclerotomy was followed by immediate improvement in the condition of tension and vision, but from the third day of the operation glaucomatous attacks set in again. Iridectomy was of no avail. Iridocyclitis developed, evolving into phthisis of the eyeball.

D.—GLAUCOMA FULMINANS.

(A rare form, which breaks out suddenly without any premonitory symptoms, and in which the course is so rapid that vision may be entirely lost within a few hours,—even within a few minutes.)

This form was observed in a patient consequent upon instillations of a few drops of atropia into the eye. Sclerotomy, performed on the day of the occurrence, brought perfect restitution *ad integrum*.

E.—CHRONIC INFLAMMATORY GLAUCOMA.

In four cases the course of the operation was normal. In one case a small prolapse of iris occurred during section, the reposition of which succeeded perfectly. Intraocular pressure became normal in three cases, and remained slightly increased in two cases. Vision improved from counting fingers at 5' to 15';

"	"	"	"	3'	"	20';
"	"	"	"	5'	"	15';
"	"	"	"	3'	"	6';
"	"	"	"	$\frac{1}{10}$	"	$\frac{10}{100}$.

F.—GLAUCOMA ABSOLUTUM.

In all these instances vision was irreparably lost, and sclerotomy made only for the

purpose of checking the further progress of the disease, viz., to abate the irritative symptoms and to cause decrease of the intraocular pressure.

Immediate perfect success was obtained in six cases, in three cases of which iridectomy had been made two or three years before without checking the morbid process. Symptoms of irritation subsided, and intraocular pressure became normal.

In two cases, of which one showed ribbon-shaped opacity of the cornea, the inflammatory symptoms subsided entirely, but tension remained slightly increased.

In one case the normal course of operation was followed by violent symptoms of irritation and by frequent intraocular hemorrhages. The wound was forced open, and prolapse of iris took place. Iridectomy broke the acme of the morbid process.

In one instance sclerotomy had to be repeated after seven weeks, when the glaucomatous attacks, which had been checked by the first sclerotomy, reappeared. The final result was good. All symptoms of irritation subsided. Intraocular pressure became normal.

The facts show that sclerotomy shares with iridectomy the faculty of diminishing the intraocular pressure, checking the glaucomatous process, and securing a certain restitution of the function of the eye. Certainly, this aim is not always attained, and sclerotomy shares with iridectomy its failures. The very great advantage which sclerotomy has over iridectomy consists in this, that by leaving the iris intact the operation is not accompanied with so many drawbacks (impairment of vision, dazzling, etc.) as present themselves in iridectomy. Which rôle sclerotomy will play in the therapeutics of glaucoma—whether it will totally supplant iridectomy or limit only the indications for the latter operation—the future alone can tell, when a truer insight into the nature of glaucoma will enable us to decide upon the best method of treatment.

For the present, summing up the results of my observations, I do not hesitate to put forth sclerotomy as the first indication in the following conditions:

1. In glaucoma absolutum.
2. In secondary glaucoma, and in glaucoma-like conditions of the eye, as observed in iritis, serous choroiditis, in certain forms of keratitis, etc.
3. In all cases of glaucoma in which

iridectomy had been made and the reappearance of the glaucomatous process necessitates the repetition of the operative procedure.

1912 ARCH STREET.

THE RESULTS OF A TEST FOR COLOR-BLINDNESS AT GIRARD COLLEGE.

BY W. S. LITTLE, M.D.

DURING April, 1880, the boys at Girard College were tested by me for color-blindness; ages ranging from 6 to 18 years; 845 boys were examined. The test employed was Holmgren's method with colored worsteds. Of those that were found defective a re-test was made to confirm the work, and the same result was attained. This is hardly necessary, as it brings the persons who are found defective into too much prominence among their associates. One boy was tested four times, failing each time, his teacher being hard to convince, as he gave the proper names to the color exhibited in the class-room, showing that when a color is held up to a class, with the statement that it is a given color, each person associates the name with the sensation it produces, and yet it may appear differently to the individuals observing it.

Color-blindness is divided, according to the Young-Helmholtz theory, into—

1. Total color-blindness;
 2. Partial color-blindness.
- Partial color-blindness is divided into—
1. Complete color-blindness;
 2. Incomplete color-blindness.

Complete color-blindness is divided into—

1. Red-blindness;
2. Green-blindness;
3. Violet-blindness.

Incomplete color-blindness exists where an inferior excitability for all three elements, red, green, or violet, or for one in particular, is present.

The condition existing under partial color-blindness, complete or incomplete, where red- and green-blindness is found, is the subject of much investigation at present, in order to arrive at the possible average of its presence among men, so as to avoid the dangers to which it exposes travellers, as red and green colors by day and night are employed on railroads to signify danger and safety, and also on

vessels at night to indicate their position. Army and navy orders are sometimes required to be conveyed by means of colored signals, and the knowledge of any color-defect is also important to youth in the selection of a trade or avocation in life. "Color-Blindness, its Danger and Detection," by Dr. Jeffries, goes fully into the whole subject. The result of examinations made thus far shows about 1 in 25 among males color-blind to a greater or less degree.

The result of the test at Girard College is as follows:

Boys examined, 845. Complete and incomplete, 38; 4.497 per cent. Complete, 29; 3.431 per cent. Red, 17; 2.011 per cent. Green, 12; 1.420 per cent. Incomplete, 9; 1.066 per cent.

The presence of 4.497 per cent. is little above the average.

There were three cases of apparent indifferance to all colors, their ages being respectively 6 years. A general deficiency in everything besides color prevents me from quoting them as cases of total color-blindness. I shall test these boys when they have increased in years and ability. I also found nine cases of violet-blindness and three cases of yellow-blindness.

Two brothers were color-blind. I have been unable to learn concerning the other members of this family.

There were in all 53 with color-defect, but only 38 are quoted as belonging to the dangerous element of color-blindness. The acuity of vision of the color-blind was tested, though the one is independent of the other. Of the 38 cases, 17 had full acuity of vision, and 21 were defective.

Of the 53 (almost all forms of color-defect), 24 had full acuity of vision, and 29 were defective. The examination was made without mydriasis.

I examined many of the color-blind with each eye separately, and of those examined found color-blindness for both eyes. As has been stated, it is possible to be color-blind in one eye and not in the other.

I am much indebted to President Allen, of Girard College, and the officers of the institution, for the facility given me in conducting the test; also to Dr. R. J. Hill, U.S.A., for his assistance.

The boys, on leaving the institution, are sought for in various trades and in the merchant marine, and a knowledge of their

defect would prevent them from making a choice where the want of full color-sense might stand in the way of their success.

The engraver's art affords a successful field for the color-blind, where shading is necessary, and, as they are very sensitive to shade, the defect can be made useful to art.

219 SOUTH SEVENTEENTH STREET.

A PORTABLE SURGICAL TRAY AND A NEW UTERINE TENACULUM.

BY W. W. KEEN, M.D.,

Surgeon to St. Mary's Hospital, Philadelphia.

A PORTABLE SURGICAL TRAY.

DURING an operation surgeons are frequently annoyed by losing an instrument in the folds of a blanket or by its falling on the floor, where it may be spoiled by losing its point. Moreover, even a small table alongside is often in the way, especially when many assistants are needed, as, for instance, in operations in the uterus, when one assistant must hold each leg, another uses the sponges, and another, it may be, holds a tenaculum. To obviate some, at least, of these disadvantages, I have devised a portable surgical tray, to be fastened to the body of the operator. The



material is stout tin. It is ten inches long, four and a half inches wide in the middle, and six and a half at the ends. Its sides incline one-fourth inch inward. It is one and one-fourth inches deep. At the two front corners two wire posts project one-half inch above the tray, to prevent instruments longer than the tray from falling out; the point being in the tray, the post catches the handle. At each end are three hooks of wire each doubled upon itself, so as to make a smooth end. On these scissors, dressing-forceps, ligatures, etc., can be hung. The piece *a*, as is seen, slides horizontally, and can be thus easily re-

moved and replaced. This is not a necessity, but is only to facilitate packing the tray in a smaller space. For hospital use *a* can be soldered firmly to the tray. To fix it to the body a strap two and a half inches wide is buckled over the vertical piece *a*, and to prevent the straps from sliding down there is a slight horizontal shelf of tin one-quarter inch wide in front of *a*. For many operations such a tray is not only useless, but would be seriously in the way; but for most gynaecological and other operations, when the operator is seated, as in operations on the ear, nose, throat, etc., it will be found of great use. When operations require different sets of instruments at different steps, the tray will be convenient to hold those needed at the moment. In hospitals, too, unless Morton's hospital dressing-carriage is used, the tray will be very useful in passing with the residents from bed to bed. It has been made for me by Austin & Opdyke, 1705 Chestnut Street, and costs \$1.50 for the tray alone.

NEW UTERINE TENACULUM.

When a tenaculum is used, either the operator is deprived of one of his hands for other purposes, or else an assistant must use it, in which case his hand is often very much in the way. This tenaculum is one and a half inches long, and has two hooks. Of course the size of the instrument and the number of hooks can be varied at will. The peculiarity of the instrument is that it has no handle. Instead of this it has an eye, which is threaded with wire. The tenaculum is then inserted into the uterine lip by means of dressing or other forceps, the wire is drawn right or left, and fastened by winding it around some suitable part of the speculum. If such suitable projecting part be only on one side, a slight groove can be nicked in the edge of the speculum at any point and the wire be passed first through the groove. By this means both of the surgeon's hands are free, no assistant is needed, and the needed space is not narrowed by any band.

THE Provident Dispensary at Leicester, England, contains 25,000 members, and has an annual income of \$20,000.

DR. J. E. MICHAEL has succeeded Dr. Miles as professor of anatomy in the University of Maryland.

TRANSLATIONS.

SPINA BIFIDA IN ITS ETIOLOGICAL AND CLINICAL RELATIONS. — A. Wernitz (*Inaug. Diss., Dorpat*; from *Cbl. f. Chir.*, 1880, p. 506), as a result of his studies and experience, comes to the following conclusions:

Spina bifida, better known, according to its degree, as rachischesis, meningocele, myelocele, or hydro-meningocele, is one of the commonest congenital deformities, one infant in every thousand showing it (in Germany). It is rarely the cause of difficult labor. Of ninety children with spina bifida, not operated upon, the greater number died within the first week, only twenty passing the age of five years. In his dissertation, Wernitz speaks of the hereditary relationships, the various forms, and the seat of the deformity. As regards the latter point, the author gives a tabular description of two hundred and forty-five cases. From this it appears that the lumbar and sacral regions were affected in one hundred and twenty-seven cases, the sacrum alone in fifty-three cases, while the affection is only rarely met with in other regions of the spine. The author gives an account of the nature of the trouble under its various forms, together with the complications which may arise with hydrocephalus, anencephalus, congenital club-foot, etc. He concludes this portion of his subject by describing anterior spina bifida in which the bodies of the vertebræ show openings. He also speaks of the pathological anatomy of these tumors, the normal anatomy of the sacral region and its relations with the spinal cord, from which it appears that the former often extends deeper in spina bifida than in the normal condition. The cause for this is to be sought in the circumstance that the spinal cord, which in the two-months' foetus fills the entire spinal cavity, and in spina bifida adheres to its membranes in the neighborhood of the sacrum, is stretched by the growth of the vertebral column. By the simultaneous pressure of the tightened membranes in the upper border of the defect in the vertebræ, the opening may probably widen above, while diminution of pressure causes the vertebræ which touch it to tend inwards. With regard to the cases where the spinal cord is entirely wanting, Wernitz inclines to the opinion that while the medullar portion has developed

properly the cord has not developed. As to the cerebro-spinal fluid, the question whether the hydrostatic pressure is increased or not is settled that in some cases an increase is observed. Communication exists between the central canal of the cord, the ventricles and subarachnoidal spaces of the brain, so that a tendency inward of the spina bifida tends to give rise to hydrocephalus.

The author's description of the diagnosis and prognosis is given in the original at too great length to cite: it may be noted, however, that certain cases are mentioned in which tumors of the sacral region have been extirpated, having been taken for lipomata, and which turned out to be meningoceles covered with fat. Under the head of etiology, the author, after going extensively into the developments of the spine and spinal cord, and comparing the normal condition with that found in preparations of diseased tissues, comes to the conclusion that an arrest of development is evident which leads to the defect in the bony canal and the formation of the meningocele. As to treatment, compression, ligature, puncture (alone and with injections), and excision are all fully described, together with a case of Koch's, in which excision, followed by a plastic operation, cured the defect entirely. Statistics of the various operations are added, by which it appears that puncture, with injection of iodine, is the most successful.

STRICTURE OF THE RECTUM.—From a review of Dr. Ceccherilli's work on this subject, in the *Jour. de Sci. Méd. de Louvain* (1880, p. 357), we learn that this author rejects strongly the method of forced dilatation proposed by Simon, of Heidelberg, above all as a diagnostic means. He prefers digital examination, or, if this is insufficient, the sound or the speculum. With regard to spasmodic stricture of the rectum the author concludes, after a careful examination of testimony, that the affection is to be regarded as a rectal neuralgia, not to be confounded with that painful spasm which occurs during defecation when the rectal bolus distends an anal fissure. The author does not absolutely deny the existence of idiopathic spasmodic stricture, although it cannot be affirmed in any given case that some slight superficial fissure may not exist in a fold of the anal mucous membrane. In the chap-

ter devoted to the pathogenesis of hyperplastic strictures caused by syphilis, he concludes, after a careful examination of the opinion of well-known authors, that these are simply the result of a gumma. In a valuable chapter on therapeutics the author expresses little confidence in cauterizations, and colotomy he objects to entirely. Between the two ordinary means of treatment, incision and dilatation, he prefers internal incision and adopts rapid dilatation.

ESMARCH'S BANDAGE IN THE REMOVAL OF FIBROUS ABDOMINAL TUMORS.—At a recent meeting of the Académie de Médecine (*Le Progrès Méd.*, 1880, p. 649), M. Labée read a communication relative to a modification of the operative procedure of hysterotomy applied to fibrous tumors (exsanguification of the tumor). Gastrotomy for the removal of fibrous tumors of the uterus is now a well-established operation, and M. Labée did not attempt to describe it, but simply called attention to an important modification which he has introduced into the operative procedure. The quantity of blood contained in these enormous tumors of the uterus is always considerable, and the loss of blood consequent upon the ablation of the tumor is a factor the importance of which it is impossible not to recognize, especially when it is considered that the women from whom these tumors are removed are always in a state of advanced cachexia. M. Labée conceived the idea of using Esmarch's bandage in these cases, with the view of pressing back into the general circulation as much as possible of the blood contained in the tumor, that this might be retained in the economy. The first patient on whom the plan was tried presented a rather hopeless prospect, being in a deplorable condition before the operation. She succumbed to septicæmia six days after its performance. But M. Labée was able to satisfy himself that the enormous fibroma on which compression had been practised was completely deprived of blood, more than a litre of blood having thus been restored to the system. M. Labée suggests that long needles or skewers should be fixed in the walls of the tumor at proper points to prevent the bandage from slipping off.

TREATMENT OF VARICES BY PERIVENOUS INJECTIONS.—This method was introduced by Dr. Marc Sée. M. Chabert, in a thesis recently published (*Bull. Gén. de*

Théráp., vol. ii., 1880, p. 90), gives the following points in the procedure. A hypodermic syringe with a very fine trocar is employed, the fluids ordinarily used being liquor ferri perchloridi diluted to $\frac{1}{10}$ and mixed with a little water, or else alcohol of 90°. The patient having been confined to bed for several days previously, the skin over the vein is pinched between the thumb and finger, so as to facilitate the introduction of the trocar, which should be made to penetrate the perivenous cellular tissue. Then one to three drops of the iron solution or one to two drops of alcohol are injected at a distance of five to twelve millimetres from the vessel (a quarter to half an inch). Several injections may be made around the varicose vein at different points. Two, or even one, however, will usually be sufficient. When the injection is made, the patient feels a sharp pain at the point of puncture; this pain occurs again for some days after, if not spontaneously, at least on pressure. In twenty-four to forty-eight hours the course of the vein becomes hard, painful to the touch, and slightly swollen. Dr. Chabert concludes as follows. 1. Varices are sometimes sufficiently serious, even when uncomplicated, to necessitate curative treatment, especially in the case of working-people, who are sometimes completely disabled. 2. When varices are complicated, especially by ulcers, the necessity for treatment is even more urgent. 3. Among the methods of treatment ordinarily employed, cauterization appears to have been most successful; but intravenous injections of perchloride of iron, to which may now be added perivenous injections of the same, appear to offer every chance of success, with much less danger to the patient. 4. This plan of treatment, however, needs to be followed out and the results carefully noted, as enough is not yet known of the remote results.

ARNICA.—From physiological experiments made by M. Planat, he was led to use arnica in acute superficial inflammations, such as erysipelas, angina furuncle, etc., and was so successful that he believes that arnica will abort furuncles with the most extraordinary promptness. He expects, however, that form of furuncle which he denominates diabetic furuncle. The remedy is prepared and applied in the following manner:

Extract of fresh arnica flowers, ten

grammes; honey, twenty grammes; powder of lycopodium, sufficient to make a paste of proper consistency to spread.

This is spread upon adhesive plaster and applied to the furuncle. Renew the plaster every twenty-four hours. Internally, give twenty-five to thirty drops of the tincture of arnica every two hours. The effect, M. Planat says, is so rapid as to leave no doubt of the special value of the remedy. —Bouchardat: *L'Abeille Médicale*.

OXALIC ACID AND OXALATE OF POTASSA IN DIPHTHERIA.—As soon as the diphtheritic deposit is perceived, Cornilleau directs the following prescription to be taken:

R Oxalic acid, gr. xxiii;

Infusion of green tea, ℥iv (Troy);

Syrup of bitter orange peel, ℥i (Troy).

A teaspoonful every three hours. A tea prepared by adding five ounces of fresh sorrel leaves to a quart of water, a half-cupful, or less, according to the age of the patient, to be taken at a time, every hour or so, is also advised.

After the third day of treatment a marked improvement in the condition of the patient has been observed, and convalescence generally occurs at the end of the first week. When the disease assumes the intermittent form, Dr. Cornilleau prefers the bromohydrate of quinia, given hypodermically. A tonic regimen should be maintained, milk, broth, wine, coffee, etc., being freely allowed. —*L'Abeille Médicale*.

ACTION OF COLLODION ON THE TEMPERATURE.—Dr. Raducan (*Bull. Gén. de Théráp.*) has investigated the influence excited by the application of flexible collodion to the surface. He finds that applied to the limbs it does not alter the central temperature, but applied over the peritoneum or pleura a notable lowering of the central temperature is at once obtained. There is no question that the influence of these applications in phlegmasiæ of the extremity is very favorable.

APPLICATION FOR CHANCRE.—

R Perchloride of iron, 12 grammes;

Citric acid, 4 grammes;

Distilled water, 24 grammes.—M.;

or—

R Citric acid,

Muriatic acid,

Perchloride of iron,

Distilled water, 32 grammes.—M.

—Bouchardat: *Courrier Méd.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 9, 1880.

EDITORIAL.

WITH the present number the *Philadelphia Medical Times* begins its eleventh volume. It was originated by the Philadelphia medical profession, led by the feeling that there was no journal of its class which represented the medical thought and progress of a city which yields to none in America as a centre of professional activity. How far the hopes and desires which gave birth to the *Times* have met their fulfilment it is not for us to say; but we can point to the fact that at present nearly every Philadelphia medical society of importance publishes regularly through our columns. Surely this is no mean endorsement.

The supply of papers from the profession of the city has been steadily increasing, until during the last year it has become actually embarrassing and has threatened to crowd out material received from other parts of the country. Fortunately, at this juncture we are able to announce that, in the opinion of our publishers, the time has come for an increase in the size of the journal from an issue of twenty-four to one of thirty-two pages, *without increase of the subscription-price* (four dollars a year). By this means sufficient room will be obtained for all contributions; and, whilst the *Times* will continue to be the chosen exponent of the Philadelphia medical profession, it will also be able to draw, for the support of its columns and the benefit of its readers, from all portions of the United States.

DEATH FROM ETHER.—Mr. R. N. Hartley reports a case of sudden death during etherization by arrest of respiration. The patient was in a condition of great feebleness and suffering from obstruction of the bowels.

REVISION OF THE UNITED STATES
PHARMACOPŒIA.

THE committee on the revision of the United States Pharmacopœia held, recently, a very important meeting at Saratoga. The tone of the discussions was, very properly, conservative, and it was decided to make no important alterations in nomenclature. Several new classes of preparations were adopted and one or two dropped. Of the former the more important were *Abstracts* and *Elixirs*. Abstracts, proposed by Professor Remington, of this city, are to be of the nature of extracts, but are dry powders so concentrated or mixed with inert material as to preserve a definite relation to the crude drug: we understand that they are to be twice the strength of the fluid extracts. This innovation seems to us a good one. There was a regular battle over elixirs, but finally their friends won the day by a vote of nine to eight. The closeness of the contest, we trust, will influence the number of the preparations. Elixirs are mostly frauds, not containing what they purport to do, manufacturing chemists having long ago discovered that the easiest and cheapest way of disguising strychnia, quinia, etc., is to allow them to penetrate only so far as the label of the bottle, or, at best, to be present in the syrup in very small amount. The wise physician who has a Xantippe of a wife takes an elixir, but for the use of the laity the prescription is of doubtful utility. We would have preferred such a name as *Syrupus Aromaticus* and *Syrupus Curaçoa* for the vehicles, which, it seems to us, should be the only medicines of the class introduced into the official list. The number of individual drugs and preparations which it was decided to elide from the present standard list was quite large: for obvious reasons we do not enumerate them here, especially as the decision is probably not final. It was decided that fluid measure should be employed for fluid extracts, and that the

formulae should be such that one cubic centimetre of the preparation should represent one gramme of the crude drug. This differs theoretically five per cent. from the old strength of a minim to the grain; practically there is no difference between the two standards.

Dr. Squibb was at the meeting, and battled in vain against the elixirs. Possibly disgusted at this, and certainly overburdened by his private responsibilities, he positively enforced the resignation which he had from the first threatened, and Prof. Emil Scheffer, of Louisville, was elected in his place. Professor H. B. Prescott, of Ann Arbor, Michigan, was elected to the position vacated by the withdrawal of Professor Wormley.

It will be seen that the work on the revision goes along cheerily, with every prospect of being well done. It is yet too soon to be assured as to the time of completion, but we should think the book would be out early in 1882, or possibly by the close of next year.

CORRESPONDENCE.

LONDON LETTER.

THE nervous system is the main object of scientific medical attention at the present day. The experiments of Fritz and Hitzig, elaborated and worked out fully by Professor Ferrier, F.R.S., have drawn many other observers to work at the same subject, while the clinical observations of Dr. Hughlings Jackson have created quite a new school of clinical observers and teachers. Charcot's work also is of the highest value, as every one admits. There is coming out soon a work on the diseases of the nervous system, by Dr. James Ross, of Manchester, in which the evolution of the different portions of the brain and spinal cord is contrasted with the retrograde ravages of disease, which will excite the keenest interest. It will be illustrated by numerous magnificent engravings, which will add to its value. Though Dr. Ross has published little so far, he is known to be one of our best workers, and in the hurry and bustle of existence in the manufacturing area in which he resides disease of the nervous system of every variety and kind is rife, and affords him excellent opportunities for observation,—opportunities which he has not

neglected, as will soon be apparent. Then, again, the study of the brain as "the organ of mind" is also now in the ascendant, and evolution is causing many old-established and generally-received views to undergo criticism and modification. Consequently it was with peculiar interest that I recently read a lecture, delivered by Dr. Hughlings Jackson some five years ago, on "Softening of the Brain." Up to a few years ago brain-decay, mental and motor, was promiscuously and indifferently spoken of as softening of the brain. Rokitansky described two forms,—"yellow" and "red" softening,—but few practitioners were influenced by what the great pathologist had to say, and a hazy impression prevailed that there was a general softening—such as the brain undergoes as a post-mortem phenomenon—going on in life in certain cases of brain-decay. Now, in the face of this impression, it may be well, and will be found instructive by many of your readers, to review what Dr. Jackson says in this lecture, which he lent me for perusal some few weeks ago.

He says we frequently hear the term "softening of the brain" used by educated patients who simply suffer slight and often but temporary nervous exhaustion, but who apprehend this organic change is coming upon them. It is also in use by medical men as a name for a certain rude clinical grouping of symptoms in cases in which there is really no softening. This group of symptoms he puts thus: "We see patients who have become excitable, irritable in temper, and desponding; they have found that their attention easily fails, and that they cannot do their accustomed work; they usually sleep badly; they have often what they call headache, but it is mostly not an ordinary headache, either in kind or position; it is a feeling of pressure, or sometimes of burning, and its seat is the vertex or the back of the head; there is very often, indeed, a disagreeable feeling at the occiput and in the upper parts of the spine more distressing than pain,—an intolerable physical feeling; the queer feeling in the spine is often intermittent, and frequently comes on slowly with great depression of spirits. Altogether, there is a strange mixture of 'mental' and 'physical' symptoms." This "group of symptoms" is described here by Dr. Jackson with a fidelity which every one of experience must recognize.

His explanation of these symptoms is that they "indicate nervous exhaustion, beginning often in the sympathetic nervous system, and secondarily affecting the nutrition of the highest centres in the brain. Of course this is only hypothetical, for there is no morbid anatomy of such cases." Excesses of various kinds, but still more misery or overwork, especially when the work is done under responsibility, are the chief exciting causes of this state. In the graver, more prolonged, and ingravescent cases he thinks there is not

softening of the brain, but rather greater firmness of it,—an atrophy of nerve-cells and fibres, with increase of connective tissue. He says, "Be sure there is no softening in these cases." And again (and this is an expression of opinion which ought to receive the greatest consideration from every thinking reader, as it certainly deserves it), "So far as I know, cerebral softening is always local. I know nothing of general or universal softening of the brain." Probably this announcement will seem strange to many, for it is made without qualification; and if Dr. Jackson does not know anything of general or universal softening of the brain, then no one else is likely to know anything about it. A certain amount of softening following encephalitis is found around tumors and other adventitious products, but this belongs to a distinct category. "The cases which deserve to be called cases of softening are cases in which there is blocking up of cerebral arteries, or—which is infinitely rarer—of cerebral veins. Of these only shall I speak," he goes on to say.

The portion of the brain most liable to softening is that supplied by the "middle cerebral" artery: hence hemiplegia and affections of speech are the symptoms most to be trusted in the diagnosis of cerebral softening. When perfect hemiplegia comes on in a quarter of an hour, without loss of consciousness, in a patient past middle age who has not renal disease, we are practically certain of local cerebral softening. There is in these cases softening by thrombosis,—a commoner cause of local softening than embolism. This is certainly not the group of symptoms ordinarily understood as pathognomonic of softening of the brain. The wide-spread impression that there *must* be general mental symptoms if there be "softening" is an error. Of course, "softening" such as is here described may have been preceded by evidence of brain-impairment in the group of symptoms given above, or may be followed by them, but in neither case do these symptoms directly depend on that softening. There is, however, one mental symptom in this local softening, and that is loss of speech. Deep coma may arise from blocking of the middle cerebral artery, as deep as that produced by large cerebral hemorrhage. Dr. Jackson says, significantly, "Affection of speech is a mental symptom. A person who has lost speech has lost a part of his mind." If the trunk of the middle cerebral artery be blocked, then there is very extensive softening, and a state very like imbecility, as well as loss of speech, follows; the patient's power of expression in all ways, and even the exhibition of states of feeling by smiling, may be gone. General mental symptoms may follow upon this typical case: "A patient about fifty has become hemiplegic without loss of consciousness. This is the symptomatic statement; the pathological statement is that he has local

cerebral softening." In a little time the patient may begin to wander, although he can pull himself together and clear his mind of his fancies, and can reply to ordinary questions when required. He wanders about his business or other matters familiar to him, and so may mistake strangers around him for persons to whom he is accustomed. There is an automatic state of mind. As "evolution" is the development of the mind, so here there is "dissolution" or a reducing process, commencing in the higher centres first. Especially is this liable to happen when a low-diet treatment is adopted, and the arterial tension is insufficient to supply properly with blood the parts farthest from the heart. As such brain-mischief is very apt to happen to those who "every day for years have eaten and drunk far too much," such line of treatment is very apt to be selected. The arteries of the brain have long been growing degenerate, and the nutritive supply to the brain defective. The active mental symptoms are due to brain-starvation really.

It is quite clear that active mental symptoms cannot be set up in a part which has *lost* its functional power. There is then impaired power in the highest or controlling centres, and then the lower or automatic centres escape from their control. "In any general lowering of health the very highest nervous arrangements are the first to fail (principle of dissolution). The positive or active symptoms—the illusions, delusions, and grotesque actions—are owing to the action of the lower nervous arrangements, which, except for over-excitement *permitted* by the loss of control, are healthy (principle of loss of control). When a man is delirious—his negative state—I repeat that his highest nervous arrangements in the cerebrum, the substrata of consciousness, are more or less put out of use; he has defect of consciousness." Here Dr. Jackson puts a difficult matter with marvellous lucidity. We can see how delirium shows itself from debility or asthenia, whether in febrile or non-febrile disease, and how it should be more found in sleep, in dreaming, in less severe cases than those where it is present during the waking state. It is not the evidence of vascular turgescence of the highest centres, but of asthenia in them, associated with anæmia. "It is a grave error in any case to put these symptoms down to meningitis, encephalitis, or to any kind of primary head affection. It is a deplorable error if it leads to severe purgation, to blistering the back of the neck, leeches, and low diet. The characteristic symptoms of encephalitis, meningitis, and acute brain disease generally are not mental, but physical. Thus, besides gross motor affections, convulsion, and paralysis, there are alterations of circulation, respiration, temperature, and constipation, vomiting, etc. Do not forget this seeming paradoxical statement, that the trust-

worthy symptoms in the diagnosis of acute and primary disease of the organ of mind are physical, and that the untrustworthy symptoms for that diagnosis are mental." So much for the positive symptoms of "softening of the brain" as they actually occur in reality, and contrasting as they do with those signs of mental impairment which are generally supposed to indicate that lesion.

General mental symptoms may develop weeks or months after an attack of softening, but they follow at too long an interval to be attributed to the local damage done by the softening. A general mental and bodily failure often follows a severe attack of hemiplegia the result of local softening. It is not due to the softening, or to any extension of it; it is probably a result of secondary atrophy of the whole or of a large portion of the hemisphere in which the local softening lies. Such secondary atrophy may also follow clot or other large cerebral lesion. When mental deterioration does follow, it shows itself both intellectually and emotionally. There is loss of power in connected thought on difficult, novel, or complex subjects; that is, the patient is soon confused. Then there is moral degradation: the patient exhibits peevishness and selfishness,—childish characteristics. On "the principle of dissolution" the highest centres go first; those faculties last acquired by the race and by the individual are then the first to go. Then, patients with cerebral deterioration are easily excited, because the deterioration is most pronounced in the controlling processes. The more slowly these mental changes develop, the better; the more rapid, the worse the lookout. The inferiority of a brain as regards its moral qualities is readily demonstrated in disease: it is irritable, ready to take offence, shows bad temper and greediness. Better brains have a reserve of good feeling, and it takes a longer time for the work of dissolution to degrade them. This mental aspect of disease of the brain is very useful in clearing our impressions as to the minds of persons in health. Inferior brains reveal themselves in confusion and inability to see their way in anything new or complex; so disease soon lowers them.

To return to the pathological aspect of the subject. Excluding softening about tumors and other gross lesions, Dr. Jackson knows nothing of softening of the brain except that resulting from blocking of cerebral vessels; as to "extension of softening," he knows nothing of it except in the very simple sense of its resulting from new blockings up of arteries near those formerly blocked up. He lays stress on the fact that softening of the brain is an "arterial," not a "nervous," disease proper. Pathological changes commence in the arteries or in the connective tissues, not in the nerve-tissue proper. The nerve-tissue suffers, but is not primarily at fault. It is therefore hard to see how any mental

changes which may have preceded softening could produce it; they may precede it, of course. He thinks, and a very painful recent experience gives weight to what he says, that overwork or anxiety may lead to that condition of brain—that is, excitability while there is wide-spread degeneration of the cerebral arteries, and thus a worse nutrition throughout the brain—before the actual softening of some part as the result of one of these rotten arteries being blocked up by thrombosis. Consequently modifications of the patient's ways may precede a local softening. It is often spoken of by the patient's friends as "alteration of the disposition;" irritability and selfishness are predominant. "This prior condition of ill nutrition does not lead to *general* softening, however slight we may suppose that softening to be," so far as he knows. He then goes on to review the general condition of patients whose cerebral arteries are liable to be blocked up. It is well to inquire into the state of the heart, arteries, and urine when a patient presents himself because he cannot use his arm or leg. "Suddenly-occurring and transitory slight symptoms, such as affections of speech, unilateral numbness, may be owing to little foci of softening (or, rather, to thrombosis of small arteries, which in due time lead to softening), just as much as permanent paralysis may be due to extensive softening. Of course, the slighter the symptoms, the more need is there practically to consider many possibilities, for slight symptoms are not necessarily so easy of explanation as grave symptoms often are. Slight and transitory hemiplegia—which we are warranted in putting down to blocking up of very small arteries—is often hastily ascribed to general states of ill health,—for example, to affection of the liver, etc. At the same time, it is only an inference that such slight and transitory paralytic symptoms depend on small foci of softening, for there is no, or practically no, morbid anatomy of such slight symptoms."

Now, in this lecture Dr. Hughlings Jackson has told us, with much perspicuity, what is the pathology and what are the clinical phenomena of softening of the brain; he has not only taught us much positively, but also much negatively. He has told us that the group of phenomena, physical and mental (especially the latter), which have been in the past regarded as pathognomonic of softening of the brain, are not associated with any such lesion. He has told us, in decisive language, that he does not know any general symptoms of brain-softening, and that when that morbid change does occur the phenomena manifested are motorial, not mental. So far, so good. But will some authority on diseases of the nervous system kindly tell us what is known, or even believed, about the pathological condition underlying that group of symptoms given with such fidelity by Dr. Jackson, and quoted

in the early part of this letter, which our forefathers, our immediate predecessors, and even the bulk of the present generation, call "softening of the brain"?

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held at the hall of the College of Physicians, Philadelphia, September 8, 1880, Dr. Albert H. Smith, President of the Society, in the chair. Dr. W. R. D. Blackwood read a paper on the "Treatment of Dysmenorrhœa by Electricity" (see p. 3), which was received with marked attention. He illustrated the lecture with large diagrams, and exhibited a number of special electrodes of his own design for use in uterine electro-therapeutics, with others adapted to general purposes.

DISCUSSION ON THE ELECTRICAL TREATMENT OF DYSMENORRHŒA.

Dr. Charles K. Mills said that he had found the faradic current very serviceable in young girls where the menses were slow in appearing, and where nervous symptoms and pain were present: in such cases the rheophores, well moistened, were applied externally over the sacrum and above the pubes. In dysmenorrhœa electricity is also very useful, but will not succeed in all cases.

Dr. W. R. D. Blackwood, in reply to a question, said that he had used electricity in cases of menorrhagia, although not very often, as the effect, though marked, is temporary. Faradism produces, undoubtedly, instantaneous contraction of the uterus, and in post-partum hemorrhage is very effective. For this purpose a battery made by Drescher, of New York (an improvement upon the small Gaiffé instrument) is well adapted, and can be carried in the pocket or the satchel. Where bleeding threatens to become extensive, he constantly resorts to this expedient, and always finds it to produce rapid and complete contraction of the uterus, which, moreover, remains contracted.

The speaker had never seen the hemorrhage made more profuse by electricity. In cases of dysmenorrhœa the flow is decidedly increased in quantity, especially at the first period after its application; it is less so at subsequent periods, but even at first is not excessive or sufficient to cause any alarm. When amenorrhœa follows a prolonged sea-voyage the application of electricity produces very marked effects, the flow coming on very soon after the proper use of the battery, the electrical sound being preferably employed in the uterus. By the use of the same instrument with a strong galvanic current through zinc

rheophores he had been able to produce a caustic effect upon the mucous membrane: indeed, in one case of membranous dysmenorrhœa he had heated the galvano-caustic porcelain-tipped sound, and, passing it along the entire uterine canal, produced the effect of the actual cautery. The case was at once relieved, and subsequently entirely recovered.

Dr. Henry Leffmann, referring to the diagram, observed that it appeared as if, with the double pole instrument, there must be a loss of electricity, according to the axiom that where there are two parallel currents of electricity there is a loss in the strength of the current.

Dr. J. L. Ludlow agreed with the lecturer concerning the want of appreciation of electricity among the profession generally. With reference to the subject under consideration, he believed that neuralgic cases of dysmenorrhœa would be more likely to be benefited by electricity than any other variety, as they also are less amenable to treatment by ordinary methods. He mentioned two cases where a change of locality was followed by entire relief from dysmenorrhœa, which, however, reappeared when the patients returned to the city. He could only attribute the relief in the first instance to the change of residence and the electrical condition of the atmosphere.

The President said that he would like to ask the lecturer to explain, in the application of the galvano-cautery in the case of membranous dysmenorrhœa to the entire internal surface of the uterus, whether he wished to be understood as saying that he resorted to the caustic application of high heat, or the stimulating effect of a lower degree of temperature.

In regard to the use of electricity in the treatment of uterine troubles the President acknowledged that his views had been materially modified within a few years, and he now feels less enthusiastic on the subject than he did earlier in his practice. He had generally found immediate relief from the pain and other symptoms; so that very high hopes were entertained by the patients of permanent relief. They were delighted with the trial, but he had very seldom seen their expectations realized, and in some cases the depression of spirits caused by the disappointment did the patients more harm than the electricity had done them good. He had never used the double electrode described by the lecturer, having only employed the stem or a small metallic globe in contact with the uterus, the other electrode being a large sponge placed externally over the hypogastrium or in the sacral region; by varying the position of the external pole the objection of one of the former speakers could be obviated.

There is no danger of increasing hemorrhage. He had never known it to produce any trouble, nor is there any contra-indication to its use. He had always looked upon elec-

tricity in this application as chiefly a local anæsthetic, and had found it to give much relief to cases of dysmenorrhœa. In many cases, however, the pain begins after the flow has begun, which makes the application practically unavailable.

In reply to a question, the President said that the anæsthetic effect, or the relief from the pains of dysmenorrhœa, was very decided after the first application; the second time, the effect was much diminished, and it gradually diminished until finally there was no effect whatever. This had been his own experience; but he was glad to hear that the lecturer had been more successful.

Dr. Blackwood, in closing the debate, said that he had never had a case in which the results had proved that electricity had done any harm. He would not say that electricity is the sole remedy, or that it is to be used in every case; but under proper conditions it will be successful after the failure of all other treatment. In hundreds of cases he had used it without any evidence of injury and with permanent success. Many such instances are of ten years' standing. It hastened the appearance of the menses at times, and usually increased the quantity of the flow at first, but not to excess. He had seen cases, just like those mentioned by the President, in which immediate benefit was not attained in the early applications, but he had found that ultimately these cases do well if the treatment is persevered with. Treatment should not be discontinued after a few trials, but it must be persistently applied for eight or ten months, or longer, until decided relief is obtained. Of course some exceptions may exist to this rule. As to the time of application, he had very rarely used electricity after the flow had become established unless pain is then present, when, if the suffering is severe, the battery is employed. Galvanism and induction currents have the power to relieve the pain of dysmenorrhœa, just as they alleviate any other pain. He had found electricity capable of relieving the muscular pains of remittent and intermittent fever, either by general galvanization, according to the plan of Beard and Rockwell, or by applications through the solar plexus.

The objection of Dr. Leffmann does not hold good against the plan proposed of doubling one of the poles, the other being in the uterus. There is no loss of current and there are no parallel currents as thus applied, and the entire current must pass out through the uterine tissues by way of the intra-uterine sound, which is insulated to the point where it enters the uterine canal.

In conclusion, he said that he was satisfied that by persistence in the treatment, with proper apparatus, and especially by using the galvanic current, electricity can relieve, and that permanently, ninety per cent. of cases of dysmenorrhœa. Those most likely to be re-

lieved are the neuralgic patients; the next most frequently treated with success are congestive cases. In the latter the uterus can be brought to its healthy condition without the use of any constitutional remedies or caustics. In a case of endometritis with excessive congestion, recently under his charge at St. Mary's Hospital, the uterus had been much reduced within two weeks.

In replying to the question as to the application of the actual cautery, he said that he had used the porcelain button at a low heat, which he had passed throughout the length of the uterine canal. The case had been thoroughly cauterized previously by the usual remedies, but without effect. She had no more casts after the use of the electricity, and has now reached the menopause in perfect health.

In some cases the speaker uses other remedies besides electricity in the treatment of uterine troubles. Ergot and viburnum prunifolium had given him good results. He had brought the paper before the Society for the purpose of insisting that by persisting in the proper, systematic, and thorough application of electricity we can cure the majority of cases of dysmenorrhœa and greatly relieve the rest.

On motion, a vote of thanks was given the lecturer for his interesting paper.

RENAL CALCULUS.

Dr. William T. Taylor reported the following case. On the 30th of August, 1880, he was, early in the morning, called to see a patient suffering with intense pain in the lumbar region on the left side, which, though relieved by anodynes, returned several times during the next few days. The pains radiated from the left side and went to all portions of the body. On the fourth day the pain seemed to be located in the bladder, which was quite irritable. The patient was ordered diluents and diuretics, and on the morning that the report was made he passed a small stone from the urethra, which was presented, and, on motion, referred to the Committee on Microscopy for examination.

HEMORRHAGE CAUSED BY ACID NITRATE OF MERCURY.

Dr. Charles B. Nancrede said that he had two interesting cases to report. The first one illustrated the disadvantage of the practice of some practitioners of at once applying the acid nitrate of mercury to all sores upon the penis. He had been called in consultation to see a case of alarming hemorrhage from the dorsal vessels of the penis, following the above treatment. He was obliged to secure both dorsal arteries by acupressure. He subsequently had some return of the hemorrhage, but it was readily checked. Sloughing also followed, which opened the urethra, and required a plastic operation. The patient subsequently recovered, and has had a healthy

child, so that in all probability the first lesion was not syphilitic.

A CASE OF SUBLUXATION OF THE SCAPHOID BONE.

The second case is that of a man who fell from his wagon and struck his hand. It was thought to be merely a sprained hand by the resident physician, but when examined a few days later it was found that there was a subluxation of the scaphoid, much to his surprise. By making a strong pressure upon the prominent bone anteriorly, and suddenly flexing the wrist, the bone was restored to its place; a plastic dressing was applied, and the patient soon after was discharged. This accident is quite rare, and is mentioned only by Chisolm, of Baltimore. The scaphoid was not entirely out of its place, but was firmly jammed in a new position, so that its edge presented to the radius.

Dr. William M. Welch also related a case of severe hemorrhage from the penis following the application of acid nitrate to a simple sore by a homœopathic practitioner.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, SEPTEMBER 9, 1880.

THE PRESIDENT, Dr. S. W. GROSS, in the chair.

Ulcerated scirrhus carcinoma of the mammary gland occurring at an early age.
Presented by Dr. SAMUEL W. GROSS.

THE specimen before you is the entire left breast, which I amputated this morning. The patient, a married, prolific female, 27 years of age, first noticed, twenty months ago, a nodule to the outer side of the nipple, which gradually increased until the entire gland was involved. The glands of the axilla were observed to be enlarged in eight months, the nipple began to retract in twelve months, and the skin was superficially ulcerated in seventeen months, from the commencement of the disease. During the last four weeks the axillary glands increased to three times their former size, became densely indurated, and fixed to the axillary border of the great pectoral muscle and the side of the chest; the superficial ulceration was converted into a deep, crater-like sore; several nodules appeared in the skin at the inner circumference of the growth; and the mass attached itself to the pectoral muscle. There was no history of heredity, trauma, or psoriasis or eczema of the nipple.

The operation was made as thorough as possible by removing the entire gland along with its skin and subcutaneous fat, the greater portion of the pectoralis major muscle, and the involved lymphatic glands.

The interest of the case consists mainly in

the comparatively early age at which the disease was first observed,—namely, twenty-five years and four months. In my "Practical Treatise on Tumors of the Mammary Glands," which has just appeared from the press, I state that out of one hundred cases of carcinoma of the breast of which I had a record the earliest age that I had observed was twenty-eight years. Since the chapter on carcinoma was written I have met with twenty-six additional instances, and the one now recorded was the only one noted before the age of thirty.

Foreign bodies in the external auditory canal.

Presented by Dr. CHARLES H. BURNETT.

The young roach which I show you I removed alive from the ear of an Irish chambermaid in one of our large hotels last Tuesday morning. The patient stated that the evening previous, about nine o'clock, as she lay down upon her pillow, she felt something run into her ear; that she immediately experienced great and peculiar discomfort rather than pain, and that the intolerable annoyance of the movements of the creature and their attendant noises had continued all night, entirely banishing sleep. She looked very anxious and distressed, and had she not been of very large and muscular frame and in apparently robust health might have manifested graver nervous phenomena. I have known the entrance of a common fly into the ear of an infant to cause convulsions.

Under good illumination of the auditory canal by means of the forehead-mirror, I saw the central portion of the roach well down the canal, extending from above downward. This part I seized by means of delicate forceps with slender blades, and extracted the invader alive. It was 1 cm. long and 4 mm. wide at the widest part, not counting the antennæ, which are fully as long as it is. Instantly all the patient's discomfort ceased, and on examination it was seen that no harm had been done the ear at any point.

A great mistake is often made in such cases, first in supposing that the insect can do great harm, and secondly in making various rough and injurious endeavors at extraction.

The injury that does often arise in such cases is purely *post hoc*, and not *propter hoc*, as the aural surgeon sometimes has an opportunity of seeing.

Not long since, a distinguished aurist of Boston was called to see an old lady in one of the prominent families of that city, in order, as it was told him, to remove something from her ear. As he was hastily summoned, he went at once, and found the old lady in great distress and just getting over the effects of ether. The statement made to him was that her little grandchild, while playing with her on her lap, had put a small shirt-button into its grandmother's ear, and that, though it produced no discomfort, it was deemed best to summon their family medical adviser, who was

a homœopathic physician, and have it taken out. This was done, and the so-called physician examined the ear and said he could see the "button distinctly, as it was quite pearl-like in appearance." He then proceeded to extract the foreign body, but failed to do so, and, besides, gave great pain to the patient.

Finally, ether was resorted to, and a prolonged gouging and probing carried on, but no button could be got from the ear. For various reasons, the man ceased his manipulations and retired; the old lady recovered from her narcosis, but showed great signs of prostration; and, as it was supposed that the button was still in the ear, the aurist alluded to was summoned to extract it and relieve the suffering erroneously supposed to be due to its presence. He found that there was no button in the ear, and there was reason to believe there never had been, as the button which had been said to be in the ear was found subsequently on the floor near where the child and its grandparent had been sitting. What the first physician called in had seen and supposed was the button was the membrana tympani, which in the normal state looks like a pearl in color. To this he had directed his efforts, and gouged it and the ossicles of hearing entirely out, thus, of course, destroying the ear forever.

In my experience, a man, a junior partner in a machine-shop, called on me for relief from discomfort in his ear and deafness. He was a large, strong man, but was pale, anxious, and bathed in clammy sweats, manifesting, in fact, symptoms of shock. He stated that a few days previous, while crossing a street in front of a horse, the latter had splashed mud into his ear. No discomfort, save a little dulness of hearing, ensued; but on stating the occurrence to his comrades in the shop they insisted on his having the mud taken out, and they proposed to extract it, which they proceeded to do with wires and small tools. This caused great pain, but it was misconstrued as a sign of need of all the more sedulous endeavors at extracting the mud. Manipulation of the roughest kind was continued on the ear, until the man could endure it no longer. Great and continued pain ensued; the hearing remained dull,—in fact, became worse, and the man had to desist from work. Some little mud was taken out by his companions, and "several small white pebbles," as he said (most probably the ossicles). But as the pain and deafness continued, with some symptoms of dizziness and tension in the head, he concluded to seek medical advice.

Examination revealed *total destruction of the membrana tympani, it having been clearly cut away from its attachment to its bony ring, and all ordinarily visible parts of the ossicles had been similarly removed by his rough companions*. A few jets of warm water from a

syringe would have removed all the mud had it been used at the first.

It is plain to be seen that two very important considerations arise at the outset when a foreign body is or is supposed to be in the ear. First, make sure of the diagnosis; and, secondly, make no effort at extraction which will do more harm than leaving the foreign body there, whether it be animate or inanimate. Presence of mind, too, on the part of the would-be surgeon as well as in the patient will always prove to be of the greatest aid.

This summer, a gentleman, just after he had gone to bed, felt an insect enter his left ear. He, of course, felt all the usual and peculiar annoyance from its movements. Being entirely alone in his house, he was thrown altogether on his own resources at the outset. He bethought himself in his extremity of a novel method of inducing the insect to come out, for he struck a light and held his ear as close as possible to it. He says he felt the insect turn and retrace its steps and come to the mouth of the ear, when he seized it with his finger-nail, which act caught and tore off its head. Death ensued, and all movements ceased in the insect, the body of which the patient removed at his leisure.

It would be well for doctors as well as patients to know that not the foreign substance so much as the unskilful and rough treatment often practised is the real cause of the damage which sometimes occurs after a foreign body has been in the ear. The most efficient treatment is to drop a little warm water or oil into the affected ear, and employ the syringe. Instruments should be used only by the expert.

PHILADELPHIA ACADEMY OF SURGERY.

MEETING OF MAY 3, 1880.

DR. S. D. GROSS, President, in the Chair.

ON THE TREATMENT OF CLUB-FOOT.

SEVEN cases of congenital varus and equino-varus, which had been under treatment for varying periods of time, were presented by Dr. Thomas G. Morton to illustrate the manner of dealing with these deformities in the Orthopædic Hospital and in his private practice. In all cases the treatment, Dr. Morton believed, should commence in earliest infancy, with the view, at first, of correcting the varus, and consists in frequent daily manipulations of the foot and carefully-directed pressure on the tarsus by the hand of the mother or nurse. No apparatus is available at this tender age, and no tendon should ever be divided for the relief of club-foot in infancy, for a varus can, by careful and persistent stretching of the foot, always be overcome; only now and then the plantar fasciæ must be divided. It is difficult and often impossible to reduce an equinus, but this deformity can also by stretching be much improved,

and can be corrected by operation much better when the child is able to walk. Indeed, it is better to delay the section of the tendo Achillis until the child is two or three years of age, as the elevation of the heel during this time gives rise to but little inconvenience. If this tendon is cut early, a rigid contraction generally results. After the varus is corrected and the child is ready to walk, a brace is necessary to overcome the tendency to a recurrence of the deformity. The ordinary club-foot walking-shoe allows only of a hinge-motion, and, as a frequent stretching of the ankle-bones outward is desirable, Dr. Morton has long employed for this purpose a modification of the usual apparatus, as follows. Taking an ordinary leather shoe, which should lace up in front, with the lateral steel supports running up above the middle of the thigh, with transverse braces and bands above and below the knee to hold the apparatus in position, he has had an additional hinge placed (Fig. 1) opposite the external malleolus, and opposite this point a portion of the inner steel rod has been taken out, and replaced by a double antero-posterior hinge or toggle-joint (Fig. 2), which enables it to yield when pressure is made upon it, while the hinge in the

has invented an apparatus which he has used in conjunction with manipulation, consisting of bands and screws, which can be applied first under anæsthesia, in order to force the condensed and rigid tarsus and surrounding tissues into a normal position. Other forms

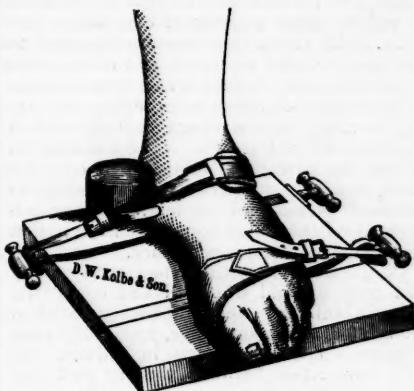
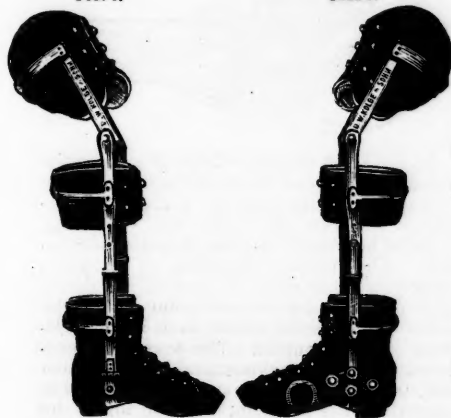


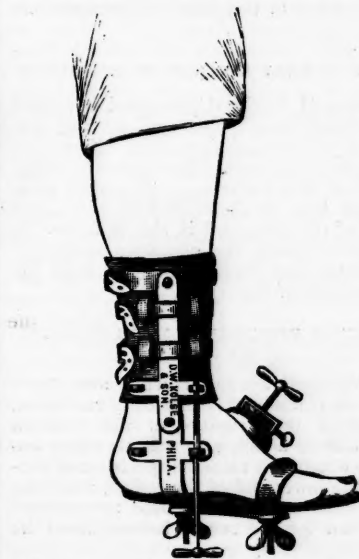
FIG. 1.

FIG. 2.



outer support allows the turning out of the foot each time it is brought down to the ground. The weight of the body resting upon it with each step gives, by this means, an outward movement or partial rotation of the foot, which is consequently communicated to the tarsus, so that this portion of the articulation is made more pliable.

In children where operations have, either through neglect or ignorance, resulted in stiff and unyielding deformity, and in adults never subjected to treatment, it becomes necessary after the division of tendons and fascia to stretch the foot at once into position by powerful pressure. For this purpose Dr. Morton



of apparatus for a similar purpose he has employed with the same object in view, and with their aid he has been able to accomplish very much. He has never seen a case where excision of the tarsal bones was required. It is quite probable that in some rigid adult cases the tarsal bones have been fractured, however, by the power employed with the stretcher.

Some of the cases presented as illustrations were cured, others remarkably improved, by the methods described; and Dr. Morton, in

concluding, stated that after stretching or tenotomy he always uses for some days a posterior well-padded tin splint, and has the foot dressed morning and evening, carefully avoiding any irritation of the skin, and that the only forms of talipes which gave trouble were equinovarus and varus, hence he had confined his remarks to these varieties of club-foot.

Dr. S. W. Gross considered it improper to endeavor to cure the varus and the equinus at the same time, but thought it better to treat the varus first and then the equinus. Stretching is really subcutaneous rupture, and is therefore of value. He is accustomed to stretch the parts by bending them over his knee, and uses plaster-of-Paris dressings to maintain eversion of the foot. If bony anchylosis of the tarsal bones occurs, excision of a wedge of bone is necessary.

Dr. Packard exhibited a foot removed by him from a child who had had congenital varus in both feet. Spontaneous separation of the left foot had taken place, apparently from pressure on the soft parts in walking, the only connection between the leg and foot being a strip of skin on the inner side.

A full report of this case will be elsewhere given.

CASE OF PRIMARY EXCISION OF THE ELBOW.

Dr. John H. Packard presented a patient upon whom, some years ago, he had performed a primary excision of the elbow-joint for compound fracture. The excision included portions of the humerus, radius, and ulna. The man has excellent motion, with good control of the arm, and is able to follow his occupation. Since the operation, some necrosed bone has been discharged from the neighborhood of the injury.

SPECIMEN OF FRACTURE OF THE LOWER END OF THE RADIUS.

Dr. William Hunt had recently amputated an arm for compound laceration of the elbow, complicated with rupture of the brachial artery, due to a fall, and was therefore enabled to obtain this valuable specimen of fracture of the lower end of the radius, produced by the same accident that had necessitated amputation for the severe lesions about the elbow.

The deformity at the wrist was the typical one known to all surgeons, and was represented to the Fellows by a wax model made before dissection of the specimen. The injury was simple, but when the soft parts were laid open considerable comminution was evident. The principal line of fracture seemed to be oblique, and there was a breaking off of the styloid process and of the posterior edge of the bone.

Dr. Hunt called attention to the satisfactory and simple explanation that the specimen gave of the projection of the lower end of the

ulna, which has been the subject of so much discussion. This is annoying to both patient and surgeon, and often impossible to remedy completely. The fact is, that nothing whatever is the matter with the ulna or its radial connections, but the carpus loses the support of the malleolar-like projection of the external border of the radius by reason of the fracture. Hence it and the entire hand are drawn by muscles or fall to the radial side. In other words, the ulna is stationary and everything below it is pulled away from it. There is a close analogy to what so often takes place in Pott's fracture of the fibula, where, the external malleolus, or the shaft just above it, being broken, the foot follows the fragment, and leaves a great deformity in the projecting tibia, although this is really in its place and is not necessarily the seat of any lesion.

This view of the projecting ulna also explains the remarkably good use of the wrist and hand which is often acquired, notwithstanding very great deformity. All that participates in the joint-structure proper is together in mass, for the ulna is not part of it: therefore, if the repair is good, good action follows, although more or less deformity exists.



Dr. R. J. Levis believed it well to drop the names Colles's and Barton's fracture, as they tend to confuse the subject. Colles's description of the form of fracture was erroneous, because he placed the line of separation too high. The fracture described by Barton—namely, a small piece chipped off the dorsal edge of the radius, with slipping up of the carpus—never exists except as an accompaniment of comminution. The fracture is produced by cross-breaking strain, and is, as a rule, transverse. There may be impaction when the lower fragment is driven above the upper, so that the former is split.

Dr. O. H. Allis had dissected a fracture of the radius after death had occurred from injury to the pelvis, and found it to correspond with the description of Dr. Levis. It was a transverse fracture with splitting of the lower fragment.

Dr. John H. Packard had found in many dried specimens no chipping of the posterior lip of the bone. Barton had also described a breaking off of the anterior lip or edge of the lower extremity of the radius, which he stated had different symptoms from the fracture of the posterior edge. Dr. Packard believed the deformity usually seen in fracture of the lower end of the bone could not be

produced by the injury described by Barton. It may be obtained, however, by bending the hand of the cadaver backwards. The deformity remaining after treatment depends on want of proper reduction of the fragments at the time of the injury. It may be reproduced, after reduction, by muscular action. The specimens and history presented by Dr. Hunt were remarkable, since the occurrence of the wrist- and elbow-injuries must have been simultaneous.

COMPOUND SEPARATION OF THE LOWER TIBIAL EPIPHYSIS.

Dr. John H. Brinton exhibited to the Academy a model of a separation of the epiphysis at the ankle, which was compound in its character. The boy, aged about 10 years, was treated conservatively for ten days, when amputation was required. The case was mentioned as bearing on the subject discussed at the last meeting of the Academy.

Dr. O. H. Allis had seen a similar case die of tetanus.

FRACTURE OF PATELLA.

Dr. R. J. Levis presented a patient who had recently been treated for fractured patella by the modified Malgaigne's hooks devised by himself. There seemed to be bony union, and little or no difference in the length of the two patellæ could be noticed.

JOHN B. ROBERTS,
Recorder.

REVIEWS AND BOOK NOTICES.

A TREATISE ON THE PRACTICE OF MEDICINE. By ROBERTS BARTHOLOW, M.D. New York, D. Appleton & Co., 1880.

We confess to a feeling of disappointment after examination of this work: we find it simply a well-thought-out and well-written volume, offering, so far as we can make out, no remarkable attractions to the practitioner who already possesses the received students' books. We had expected a larger and more pretentious treatise, whose sixteen hundred or two thousand pages would really exhaust the subject of the practice of medicine. In our early days, Wood's and Watson's Practices, clad in finest leather and majestic in the dignity of two portly volumes, graced every student's table. Now, forsooth, after twenty years of rapid and continuous growth, the science has to content itself with one more or less diminutive muslin-enclosed volume. There is not to-day any good American or English practice of medicine that we know of which unites the freshness of a thoroughly new book with the elaborateness of such classics as we have just mentioned. Surgeries and systems of surgeries abound. What, then, is the matter with

the professors of medicine? Possibly the explanation is to be sought in the tendency of human nature to follow a lead. Prof. Flint attained great success because he perceived that there was a demand for one-volume works on practice; this success led to an inundation with books of the class. The next great similar achievement, we opine, will be made by some one who perceives that there is need for works between the one-volume practice of medicine and the excessively elaborate and expensive monographs that require a bookcase for a set. Prof. Bartholow's work will, we have no doubt, sell well, as it deserves to, since it is one of the best books of its class; but it is a text-book, not a great classical treatise upon the practice of medicine.

ATLAS OF SKIN DISEASES. By LOUIS A. DUHRING, M.D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. Part VII.: *Eczema* (pustulosum), *Impetigo contagiosa*, *Syphiloderma* (papulosum), *Lupus vulgaris*. Philadelphia, J. B. Lippincott & Co., 1880.

In attempting the delineation of *eczema pustulosum*, Dr. Duhring has grappled with one of the most difficult subjects likely to engage his attention, and to say that he has succeeded in portraying this disease is too faint praise. He has not only made a good picture, but he has done well where all his predecessors have failed. A comparison of this plate with those of Wilson, Tilbury Fox, or even Hebra, shows an almost universal failure in former attempts, and a more than excellent result in this. It is, in fact, impossible to say too much in laudation of this American atlas, for each new fasciculus is a fresh triumph over innumerable difficulties,—a victory of mind over matter.

Although the remaining plates in this fasciculus have not, we suppose, given the author so much toil and anxiety for their perfecting as the one just mentioned, yet they are all equally successful. The picture of *impetigo contagiosa* is the first successful delineation of this disease which has ever appeared, and its careful study is commended to the general practitioner, since the affection is almost entirely unknown to the profession at large, though it is at times exceedingly prevalent, and its contagious character is liable to cause it to be confounded with syphilitic and other disorders. The portrait of *syphiloderma papulosum* is simply perfect; as a representation of the affection, the resources of the chromo-lithographic art could hardly go farther. The final picture of this fasciculus represents a fair average case of *lupus vulgaris*, and should be carefully studied in connection with the plate of *lupus erythematosus* in the first fasciculus; the differences between the two affections are very well brought out.

As to the letter-press, being Dr. Duhring's,

it is unnecessary to say that it is brief, clear, concise, and authoritative.

PHOTOGRAPHIC ILLUSTRATIONS OF SKIN DISEASES. By GEORGE HENRY FOX, A.M., M.D., etc. Parts XI. and XII. New York, E. B. Treat.

Part XI. of Dr. Fox's atlas contains plates representing *Herpes facialis*, *Hydroa bullosum*, *Erythema circinatum* and *E. exfoliativum*, and *Purpura simplex*. The picture of herpes facialis is a good representation of a severe form of the eruption ordinarily known as "fever-blister." The case is a very unusual one, and worthy of special examination on that account. The picture of hydroa also represents a rare form of skin disease, and one not yet recognized by all dermatologists. Dr. Fox gives his reasons for giving this affection a distinct place in dermatological nosology, and describes its chief distinguishing features with considerable detail. The plates of erythema represent also unusual forms of skin disease. That of *E. circinatum* is very good, while the picture of *E. exfoliativum* does not convey, to our mind, any notion of what appearances are intended to be represented. The plate of purpura is a fair picture of this affection.

Part XII. (concluding the work) contains plates of *Cornua cutanea*, *Alopecia areata*, *Morphæa*, *Scleroderma*, and *Sarcoma pigmentosum*. Of these, the cutaneous horn, though striking, is not a good picture; its chief interest is in the evident connection shown between cornu cutaneum and epithelioma. The picture of alopecia areata gives a fair idea of this affection, but is not a fine picture: it reminds us of the Cheshire cat in "Alice in Wonderland," gradually withdrawing from view in a sort of mist. The picture of morphæa gives some notion of the lesion, but that of scleroderma is less good, and would hardly, we think, convey a distinct idea of the disease to a beginner. The plates representing sarcoma are very striking, and fitly terminate a work which, while it can make no pretension to vie with the lithographic pictures of skin diseases presented in this country and abroad, nevertheless must take a place in the collections of dermatologists, and which, including especially the admirable descriptions of disease given by the author, is a work highly honorable to the profession of this country.

DISEASES OF THE THROAT AND NOSE, INCLUDING THE PHARYNX, LARYNX, TRACHEA, ŒSOPHAGUS, NASAL CAVITIES, AND NECK. By MORELL MACKENZIE, M.D. 8vo. Vol. I.: DISEASES OF THE PHARYNX, LARYNX, AND TRACHEA. Philadelphia, Presley Blakiston, 1880.

The first volume of Dr. Mackenzie's long-promised work is at hand. Should the second volume sustain the high character of labor so

evident in the first, the completed work will take a high position in the branch of medicine of which it treats. It is both practical and learned; it is abundantly and well illustrated; its descriptions of disease are graphic; and the diagnoses the best we have anywhere seen. To give examples of the thoroughness of Dr. Mackenzie's book, we may cite the chapter on diphtheria, which embraces forty-seven pages. The chapter on non-malignant tumors of the larynx would appear to be absolutely exhaustive. Nowhere else have we seen so elaborate a statement of the subject. A very suggestive chapter is given on the anginae caused by poisonous drugs, which includes the peculiar appearances due to certain constitutional impressions following the administration of mercury, antimony, iodide of potassium, arsenic, and belladonna. A very valuable appendix embraces a number of formulæ for topical remedies.

We must accuse our author of being occasionally a trifle pedantic, as when he speaks of painful deglutition as odynophagia, and displays over valuable space of his pages the synonyms of the various affections embraced in his text. It is a matter few persons feel a very vivid interest in that "tonsille ipertrofiche" is the Italian for enlarged tonsils. The select students who may be eager to possess this knowledge will most likely, long before the printing of this work, have secured a polyglot dictionary.

We can predict for this work a high position, and congratulate its distinguished author upon its appearance.

GLEANINGS FROM EXCHANGES.

UTERINE HÆMOSTATICS.—At a recent meeting of the British Medical Association (*Brit. Med. Jour.*, vol. ii., 1880, p. 367), Dr. Lombe Atthill read a paper on this subject, confining his remarks to the means of arresting hemorrhages from the unimpregnated uterus. The commonest causes of these were: 1. The various forms of cancer. 2. Tumors of the uterus. 3. Imperfect involution of the uterus after labor or abortion. 4. A granular condition of the intra-uterine surface. 5. Retention of a portion of the ovum after abortion. As to cancer, Dr. Atthill's opinion of the Chian turpentine treatment was favorable, although not to the extent of Mr. Clay's views as to its curative powers in malignant disease of the uterus. It seemed to exercise its greatest power in cases of epithelioma of the cervix, and to have comparatively little influence in the medullary form of the disease. The value of turpentine in cancer of the uterus seemed to be mainly due to its action in diminishing the blood-supply. The small supply of Chian turpentine and the difficulty of obtaining it pure were serious objections to

its use. Dr. Atthill believed that a pure oil of turpentine, administered in from ten- to twenty-drop doses three or four times a day, was, as a hæmostatic, quite as good, and that, if carefully rubbed up with powdered gum arabic or tragacanth, it was likely to agree with most patients.

To restrain the hemorrhage from fibrous tumors, the injection into the uterus of the liquor ferri perchloridi and of the tincture of iron had been advocated. This method was sometimes followed by satisfactory results; but it was not absolutely safe, and unless care was taken to provide a free exit for the fluid injected, either by previously dilating the cervix uteri or by using a double canula, serious results might follow. The injection of hot water in such cases was a far safer method of restraining the hemorrhage. Incising the cervix was often useful in being followed by a diminution in the hemorrhage and by relief from pain, and at the same time it permitted the introduction into the uterus of a tube of moderate size and the free return of the hot water, which should be injected at a temperature of about 110° F. Another simple and often effectual method of applying heat was the use of Chapman's spinal hot-water bags. Of drugs, none could equal ergot in its power of restraining the hemorrhage depending on fibrous tumors. It was most effective when administered hypodermically.

Imperfect evolution of the uterus implied primarily a relaxed state of the muscular tissue of the organ and an unduly distended condition of the uterine vessels, and also, in most cases, an unhealthy condition of the intra-uterine mucous membrane. When the latter existed it must be cured by treatment directed to the intra-uterine surface. To check the hemorrhage at the time of its occurrence hot water was a safe plan of treatment, and, generally, easily carried out. Ergot, quinine, and strychnine were, in cases of imperfect involution of the uterus, indirect hæmostatics. In the chronic form of the affection, Dr. Atthill had administered Chian turpentine with benefit.

Hemorrhage due to a granular condition of the vaginal aspect of the cervix might be arrested by the direct application to the bleeding surface of almost any astringent; but to prevent its recurrence a healthy condition of the cervix must be brought about by the free application of some strong caustic.

The retention of a portion of the ovum after abortion sometimes gave rise to very troublesome hemorrhage. In such cases dilatation of the uterus and removal of the retained portion by a curette might be performed unless contra-indicated, but it was liable to give rise to cellulitis and even to peritonitis, and Dr. Atthill therefore strongly recommended in such cases, at least as a preliminary measure, the syringing out of the uterus with hot water. He had no faith in the administration of

astringents by the mouth in cases of uterine hemorrhage depending on the causes which he had enumerated. In conclusion, he suggested that the most important questions for discussion in connection with the subject of uterine hæmostatics were these: 1. What is the value of Chian turpentine in arresting hemorrhage in cases of cancer of the uterus? 2. Is Chian turpentine the only variety of the drug of use in such cases? 3. In what other forms of uterine hemorrhage is the administration of turpentine indicated? 4. What is the value of the intra-uterine injection of hot water: (a) in cases of hemorrhage depending on the existence of fibrous tumors of the uterus; (b) in cases of imperfect involution of the uterus; (c) where portions of the ovum have been retained after abortion?

SOAP BARK.—The bark of quillaia, a Chilean tree, contains among other ingredients saponin, a principle widely diffused throughout the vegetable kingdom, and which makes an abundant froth with water. It is stated that an infusion of the bark fulfils all the requirements of a mild soap, and further acts as a moderate stimulant and astringent on the skin. It has been used with marked benefit in pityriasis capitis, and has afforded excellent results in chronic ulcers and eczema of the extremities. The infusion is also a valuable remedy for aiding in arresting fetid perspiration and excessive secretion.

In cases involving the face and armpits, the patient is instructed to dip a small piece of sponge in the infusion and carefully mop over the surface once or twice daily. When the hands or feet are affected they should be bathed in the solution nightly, or on alternate nights, according to the condition. When a more active stimulant and astringent effect is required, the tincture of saponin can be employed with much advantage. The tincture is made by extracting the bark by strong boiling alcohol (4 ounces of bark to 1 pint of alcohol). It is miscible with both water and oil, and has the power of dissolving, emulsifying, and removing fats and dirt from the skin. In many diseases, especially in seborrhœa sicca, it is far preferable to the tincture of green soap. It has all the advantages that are claimed for the latter, and at the same time is free from the high diffusive, penetrating, and destructive action on the tissues that the latter possesses. This tincture has been used with great benefit, not only in diseases to which the infusion is applicable, but also in general thinning and loss of hair in different parts of the body.

Tincture of quillaia also possesses very active powers as an emulsifying agent, and appears likely to occupy a useful place in pharmacy for that purpose. Mr. Collin (*Phar. Jour.*, September 20, 1879) has prepared with complete success emulsions of a number of substances, such as chloroform, fixed oils, copaiba, etc.

The following formula for *mistura filicis maris* is adopted at Guy's Hospital :

R Ext. filicis liq., f3i;
Tinct. quillaia, f3ss;
Syr. zingiberis, f3ss;
Aq. destillat. ad f3i.—M.

If some mercury be shaken up in a bottle with tincture of quillaia, the metal is reduced to a very fine state of division. It has much the appearance of hydrarg. cum creta, and, examined with a lens, is seen to be composed of distinct globules of mercury.—*Dub. Jour. of Med. Sci.*, September, 1880.

CONGENITAL NEUROTIC PAPILLOMA.—At the recent meeting of the British Medical Association (*British Med. Jour.*, vol. ii., 1880, p. 387), Mr. Wyndham Cottle read a description of the case of a boy whose skin presented lines of dark wart-like growths in the course of certain nerves. These lines were confined to one side of the body and limbs, and the rest of the skin was normal. The markings had existed from birth, and followed the course of the cutaneous branches of the fifth nerve, the internal cutaneous, intercosto-humeral, and saphenous nerves, and also occupied the middle line in front. They were limited to the right side, and were composed of contiguous filiform papillomata, and in structure corresponded to ordinary filiform warts. The lesions were closely allied to ichthyosis hystrix, from which they were separated by being unilateral, following the course of certain nerves, and being attended by no accumulation of epithelial debris, horny plates, etc., from alterations in the sebaceous glands. They probably depended on morbid intra-uterine nerve-influence, akin to the zoster of later life, and formed a striking example of perverted nerve-action in nutrition. Mr. Cottle proposed the designation "congenital neurotic papilloma."

COLOR-BLINDNESS IN THE PROFESSION.—At a recent meeting of the British Medical Association seven hundred members were examined on this point: twelve were completely color-blind, six red-blind, and six green-blind, and two were incompletely color-blind, one red and one green,—in all, fourteen. Of four others who were not color-blind it may be said that their chromatic sense was feeble. A large number who presented themselves for examination expressed a belief that they were color-blind whose color-sense was yet found on examination to be normal.

HIRSUTIES REMOVED BY THE GALVANIC PESSARY.—In a discourse on menstrual insanity at the recent meeting of the British Medical Association, Dr. J. Crichton Browne referred to a case seen in consultation with Mr. Tait, many years ago, in which a bearded lady had been benefited by the introduction of a galvanic pessary. The beard subsequently fell off, and the patient's mental condition, which was that of melancholia, improved so that she recovered completely.

MISCELLANY.

A FRENCH DOCTOR ON GLUTTONY.—Dr. Gaétan Delaunay, in a recent essay on biology, addressed to the French Academy of Sciences, devotes a chapter to the study of *gourmandise*, or gluttony, which, in the opinion of the scientific writer, is more commonly observable in men in proportion as they are lower down in the scale of civilization. Intellectual development and an immoderate love of eating and drinking are rarely to be met with in the same person, those who are most addicted to gluttony being savages, negroes, idiots,—all, in short, whose brains lie dormant. In European countries he remarks that, as a rule, the poor are more given to gluttony than the rich, the peasant than the tradesman, the women than the men, children and old persons than adults, the weak than the strong, fanatics than free-thinkers. According to the learned doctor, the profession or calling in modern French society most remarkable for vivacity at the dinner-table is the clerical profession. First on the list of gluttons, then, he places prelates and priests; second, diplomatists; third, magistrates; fourth, superior state functionaries, such as state councillors and others of similar rank; fifth, bankers and financial men; sixth, independent persons, who live on their incomes in idleness; and last, artists and literary men. Dr. Delaunay's theory is, in a word, that the greater the intelligence, the more the mind is engaged or the brain works, the less disposition there is for gluttony; and, following up this theory, he points out, we presume from personal observation, that among artistic classes musicians, whom he considers to be the least intelligent, are the most fond of good cheer, and in the category of singers tenors are greater gluttons than baritones. With regard to gentlemen of the brush and chisel, it is the painters who are more addicted to inordinate eating than sculptors, painters of what is called *genre* being more *gourmand* than landscape-painters. Women, this young laureate of the Academy tells us, are more greedy than men; milliners, adds the doctor,—who seems to have enjoyed the privilege of penetrating into all the dining-rooms of France,—being decidedly greater gluttons than dressmakers.

HIGHER MEDICAL EDUCATION.—A special committee, in a report on medical matters to the Supreme Lodge, Knights of Honor, say that among the certificates of death "we found a death recorded as caused by 'organic duoyenum of the heart,' a peculiar form of cardiac disease of which your committee have no knowledge; one caused by 'dysphagia on account of closing glottis,' and we are left to conjecture whether or no it was done voluntarily, by due process of law, or a dispensation of Providence; another was caused

by 'congestion of the brain and falling from a building:' the primary cause of death we are unable to determine; another, in a little more than three months after initiation, died of the following onslaught of maladies: 'inflammation of neck of the bladder, acute bronchitis, pleuro-pneumonia, inflammation of the left ear, nephritic trouble, and functional cerebral.' Trouble enough to kill an entire lodge."—*Kings County Medical Society*.

INFANT MORTALITY IN THE BELFAST WORKHOUSE.—In reply to a question put by Mr. Arthur Moore, M.P., whether his attention has been called to the statement in Dr. McCabe's recent report on Belfast Workhouse, that within the six months from January to June eighty-two infants have died in that institution, and if he would inform the house what percentage of the whole number of infants this represents, the chief secretary replied that the ratio of mortality was thirty per cent. This is nearly as bad as the "Butcher's Bill" of the old Foundling Hospital in Dublin, in which institution ninety-two per cent. of all the infants were annually made away with for a long series of years. Subsequently Mr. Moore gave notice that next session he would move a resolution demanding a reform of the Irish poor-law and its administration.

XYLOTHERAPY.—At a recent meeting of the Société de Thérapeutique, M. Dujardin-Beaumez read for M. Jourdanis a note on the æsthesiogenic properties of certain woods applied to the skin, which he calls xylotherapy (*La France Médicale*). M. Jourdanis has applied plates of wood to the insensible skin, and, as with plates of metal magnets, sinapisms, and blisters, has obtained a return of sensibility. The application of wood seems to be more active than the other means. All woods do not act with equal intensity, and with regard to their efficacy may be classified in the following order: cinchona bark, thuja, rosewood, mahogany, pitch-pine, walnut, maple, apple; poplar, ash, and plane produce no effect. Return of sensibility is accompanied by congestion of the skin. We cannot suppose these phenomena to be caused by electric currents.

EPILEPSY FROM A FOREIGN BODY IN THE EAR.—Dr. Katz, of Berlin (*La Presse Médicale Belge*), had recently under his care a woman, æt. 30, who had never shown the least sign of hysteria or any other disease of a nervous origin. For a year she had had very troublesome noises in the ear, and about the same time became subject to epileptiform attacks at intervals of one or two months. All the means employed to cut short these attacks were fruitless. When Dr. Katz saw the patient, at the end of last year, he was not long in discovering at the bottom of the left auditory meatus a black mass, which was extracted with some difficulty, and was found to consist of a roll of cotton wool covered

with cerumen. Freed from this foreign body, the woman found herself relieved at the same time of the disagreeable sensations in the left ear and the convulsive fits.

MUTUAL AID ASSOCIATION OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY.—On Thursday, 16th ult., the first social reunion of the association was held at the residence of the President, Dr. Benj. Lee, Manheim Street, Germantown. In addition to the members of the Society, a number of prominent physicians were present by invitation. The entertainment lasted from four till eight in the evening, and the company spent an exceedingly pleasant time in the spacious grounds (some sixteen acres in extent), the enjoyment being heightened by a delightful concert performed by an orchestra, the illumination of the gardens after dusk, and a bountiful attention to the necessities of the inner man. The pleasure of the event was enhanced by the sedulous attention shown to his guests by Dr. Lee's accomplished family.

THE TEACHING OF OBSTETRICS.—In a discourse on this subject before the British Medical Association (*Brit. Med. Jour.*, vol. ii., 1880, p. 375), Dr. Macnaughton Jones stated the three following propositions: 1. The efficient teaching of an obstetric class cannot be effected in a course of less than one hundred lessons. 2. An attendance on at least twenty cases of labor should be required of the candidate before he is permitted to present himself for his final examination, these cases to be attended in some recognized hospital or maternity or under the supervision of a recognized teacher. 3. The candidate should be required to produce proof, by notes of cases or otherwise, that he has attended in the wards or exterior department of a hospital a given number of uterine cases.

A POSITIVE SIGN OF EARLY PREGNANCY.—Dr. J. H. Caritens, in the *Detroit Lancet* for September, calls attention to the color of the mucous membrane of the vagina and cervix uteri as a positive sign of pregnancy during the first three months.

He says, "This I have always found of a purplish blue, or rather deep violet hue, in pregnant women, and I have depended on this peculiar color in making a diagnosis of pregnancy in the first, second, and third months. I can say it has never failed, and it is not produced by any pathological condition: the different colors produced by uterine disease cannot be mistaken for this pathognomonic violet hue."—*Maryland Medical Journal*.

TREATMENT OF PSEUDO-MEMBRANOUS COLITIS BY EUONYMIN.—Dr. Blondeau brought before the Société de Thérapeutique recently (*La France Médicale*) a case in which he had employed euonymin in one of his patients suffering from pseudo-membranous colitis which had been vainly treated by the most energetic remedies. He prescribed—

euonymin, 0.05 gramme; extract of hyoscyamus (B.P.), 0.10 gramme, made into two pills, one to be taken morning and evening. After six days of this treatment, the patient had regular motions, and recovered her health, which she had lost for some months.

PRE-NATAL IMPRESSIONS.—An English medical paper says that a Maryland physician reports the case of a lady who, during pregnancy, carried with her a pocket edition of Moore's Poetical Works, which she read almost constantly. Her child, at three years of age, exhibited a most wonderful gift of putting sentences in rhyme,—in fact, naturally expressed his little ideas and thoughts in flowing measure! Blame not the bard; but a case like this shows how important is a well-assorted library to a gravid uterus.

THE END OF TWO BOGUS COLLEGES.—Replications were recently filed in Court of Common Pleas, No. 3, to answers submitted by the "Eclectic Medical College of Pennsylvania" and the "American University of Philadelphia." The answers of the defendants set out that they claimed to exercise their rights, privileges, franchises, etc., by virtue of an act of Assembly, dated March 26, 1867, incorporating the latter college, and an act of February 25, 1850, incorporating the former.

It was to these answers that counsel for the Commonwealth filed replications. They aver that the above corporations have forfeited their charters, because of, first, the conferring of degrees upon persons not possessing the qualifications such as are prescribed by their charters; second, the sale of diplomas; third, the granting of degrees of doctor of medicine, and antedating such diplomas in order to make it appear that the recipients had the right to practise medicine; and, fourth, the issuing of diplomas with forged signatures. After the replications were filed, counsel for both of the defendants confessed judgment of ouster in favor of the Commonwealth, and filed as a part of the record a letter from Dr. Buchanan authorizing him to do so.

PORRO'S OPERATION SUCCESSFULLY PERFORMED.—Dr. Elliott Richardson, of this city, recently performed Porro's operation successfully, the mother being a well-known dwarf only forty-two inches in height and thirty-two years of age. This is the first successful operation of the kind which has ever been performed by an English-speaking surgeon.

FALLING OF THE HAIR.—Mr. James Startin, in the *British Medical Journal*, suggests the following application in general loss of hair without obvious cause:

R Vaselinei,
Ol. ricini, aa ʒss;
Hyd. ox. rub., gr. v;
Liq. ammon. fort., fʒss;
Ol. rosmarini, gtt. v.—M.

THE death of Prof. Polli, famous for his researches upon fermentation, is announced.

CHOLERA has broken out at Saratov, on the Volga, and at Orel, in Russia.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 19 TO OCTOBER 2, 1880.

IRWIN, B. J. D., MAJOR AND SURGEON.—Relieved from duty in Department of Dakota, and to report in person to the Lieutenant-General commanding Military Division of the Missouri, for duty as Attending-Surgeon at Headquarters of that division, relieving Surgeon Spencer. S. O. 205, A. G. O., September 24, 1880.

SPENCER, W. C., MAJOR AND SURGEON.—When relieved by Surgeon Irwin, to report in person to the Commanding General, Department of Dakota, for assignment to duty. S. O. 205, c. s., A. G. O.

GODDARD, C. E., MAJOR AND SURGEON.—To report in person, at the expiration of his present leave of absence, to the Superintendent Mounted Recruiting Service, for duty as Post-Surgeon at the Cavalry Depot, Jefferson Barracks, Mo. S. O. 205, c. s., A. G. O.

BROWN, J. M., CAPTAIN AND ASSISTANT-SURGEON.—To accompany battalion Sixteenth Infantry from Cantonment on the Uncompahgre, Col., to Fort Garland, Col., and there remain on duty. S. O. 211, Department of the Missouri, September 22, 1880.

BREWER, J. W., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to the Commanding General, Department of the South, for assignment to duty. S. O. 205, c. s., A. G. O.

TREMAINE, W. S., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in Department of the Missouri, and to report by letter, at the expiration of his present sick-leave of absence, to the Surgeon-General. S. O. 205, c. s., A. G. O.

MUNN, C. E., CAPTAIN AND ASSISTANT-SURGEON.—To accompany the battalion of the Fourth Cavalry, which is relieved from duty with the Ute Expedition, to Fort Garland, Col., and then proceed to and take post at Fort Hays, Kansas. S. O. 200, Department of the Missouri, September 21, 1880.

WEISEL, D., CAPTAIN AND ASSISTANT-SURGEON.—To report in person, at the expiration of his present leave of absence, to the Commanding General, Department of the East, for assignment to duty. S. O. 205, c. s., A. G. O.

HARVEY, P. F., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Snelling, Minn. S. O. 113, Department of Dakota, September 22, 1880.

WINNE, C. K., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Brady, Mich., and assigned to duty as Post-Surgeon at Fort Schuyler, New York Harbor. S. O. 167, Department of the East, September 21, 1880.

REED, W., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon at Fort Ontario, N.Y. S. O. 167, c. s., Department of the East.

BIART, V., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty in the Department of the Missouri, and to report in person, at the expiration of his present sick-leave of absence, to the Commanding General, Department of Dakota, for assignment to duty. S. O. 205, c. s., A. G. O. The operation of above order suspended until May 1, 1881. S. O. 209, A.G.O., September 30, 1880.

RICHARD, CHARLES, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Snelling, Minn., and assigned to duty as Post-Surgeon at Fort Maginnis, M.T. S. O. 110, Department of Dakota, September 15, 1880.

BENHAM, R. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty with escort to working-parties on extension of Northern Pacific Railroad at Camp Houston, D. T. S. O. 113, c. s., Department of Dakota.